XR-C5110R/C5120R

SERVICE MANUAL

AEP Model
UK Model

Photo: XR-C5120R

Model Name Using Similar Mechanism	XR-C5100R
Tape Transport Mechanism Type	MG-25Y-136

SPECIFICATIONS

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 – 18,000 Hz
Signal-to-noise ratio	

Cassette type	
TYPE II, IV*	61 dB
TYPE I	58 dB

* XR-C5120R only

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz
Usable sensitivity	9 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	
	0.7 % (stereo), 0.4 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

MW/LW

Tuning range	MW: 531 -- 1,602 kHz LW: 153 – 281 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	40 W × 4 (at 4 ohms)

General

Outputs	Audio output Power aerial relay control lead Power amplifier control lead Telephone ATT control lead (XR-C5120R only)
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative earth)
Dimensions	Approx. 188 × 58 × 181 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 164 mm (w/h/d)
Mass	Approx. 1.2 kg
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

FM/MW/LW CASSETTE CAR STEREO

MICROFILM

SONY®

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Flexible Circuit Board Repairing

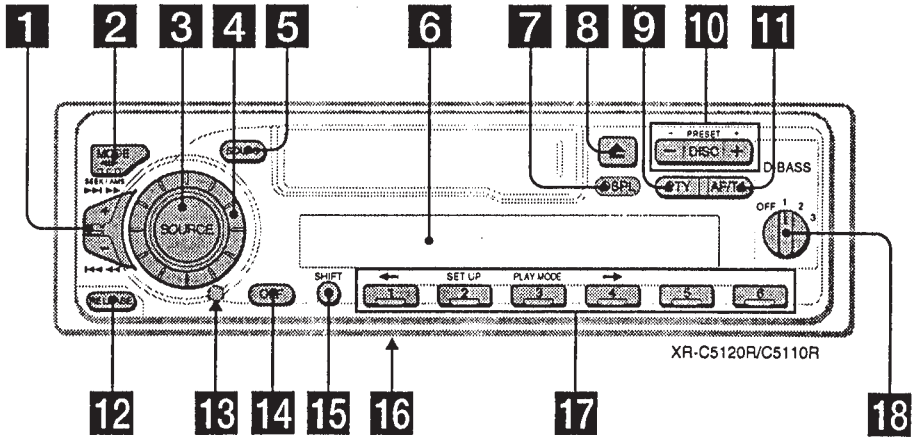
- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

This section is extracted from instruction manual.

Location of controls



Refer to the pages listed for details.

1 SEEK/AMS (seek/Automatic Music Sensor/manual search) control
6, 8, 10, 13, 19

2 MODE (◄I►)button

During tape playback:
Playback direction change 6

During radio reception:
BAND select 7, 8

During CD or MD playback:
CD/MD unit select 18

3 SOURCE (TAPE/TUNER/CD/MD) button
6, 7, 8, 11, 18

4 Dial (volume/bass/treble/left-right/rear-front control) 5, 16

5 SOUND button 16

6 Display window

7 DSPL (display mode change) button
6, 8, 9, 18

8 ⏏ (eject) button 6

9 PTY button
RDS Programme 13

10 PRESET/DISC button

During radio reception:
Preset stations select 8

During CD/MD playback:
Disc change 19

11 AF/TA button
9, 10, 11, 12

12 RELEASE (front panel release) button
4, 21

13 Reset button (located on the front side of the unit behind the front panel) 4

14 OFF button 4, 6

15 SHIFT button
PLAY MODE 7, 8, 10, 12, 19
SET UP 5, 13, 16, 18

16 POWER SELECT switch
(located on the bottom of the unit)
See "POWER SELECT switch" in the Installation/Connections manual.

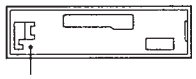
17 Number buttons 8, 10, 12

18 D-BASS control 17

Getting Started

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Remove the front panel and press the reset button with a pointed object, such as a ballpoint pen.



Reset button

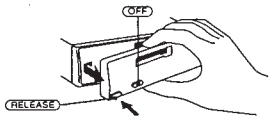
Note
Pressing the reset button will erase the clock setting and some memorized functions.

Detaching the front panel

You can detach the front panel of this unit to protect the unit from being stolen.

1 Press (OFF).

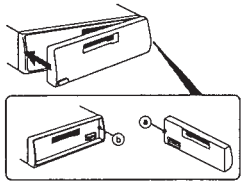
2 Press (RELEASE), then slide the front panel a little to the left, and pull it off towards you.



Notes
- *Be sure not to drop the panel when detaching it from the unit.*
- *If you detach the panel while the unit is still turned on, the power will turn off automatically to prevent the speakers from being damaged.*
- *When carrying the front panel with you, use the supplied front panel case.*

Attaching the front panel

Attach part Ⓐ of the front panel to part Ⓑ of the unit as illustrated and push the left side into position until it clicks.



Notes
- *Be sure not to attach the front panel upside down.*
- *Do not press the front panel too hard against the unit when attaching it.*
- *Do not press too hard or put excessive pressure on the display window of the front panel.*
- *Do not expose the front panel to direct sunlight or heat sources such as hot air ducts, and do not leave it in a humid place. Never leave it on the dashboard of a car parked in direct sunlight or where there may be a considerable rise in temperature.*

Caution alarm

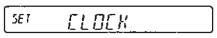
If you turn the ignition key switch to the OFF position without removing the front panel, the caution alarm will beep for a few seconds (only when the POWER SELECT switch on the bottom of the unit is set to the Ⓐ position).
If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.

Setting the clock

The clock uses a 24-hour digital indication.

Example: To set the clock to 10:08

1 Press (SHIFT), then press (2) (SET UP) repeatedly until "CLOCK" appears.



❶ Press (4) (→).

The hour indication flashes.

❷ Set the hour.

❸ Press (4) (→).

The minute indication flashes.

❹ Set the minute.

2 Press (SHIFT).

The clock starts.

3 Press (SHIFT).
After the clock setting is complete, the display returns to normal playback mode.

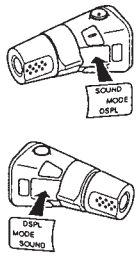
Note
If the POWER SELECT switch on the bottom of the unit is set to the Ⓐ position, turn the power on first, then set the clock.

Other Functions

You can also control the optional CD or MD units with the rotary commander .

Labelling the rotary commander

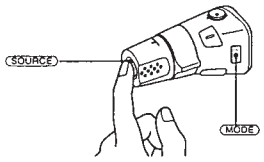
Depending on how you mount the rotary commander, attach the appropriate label as shown in the illustration below.



Using the rotary commander

The rotary commander works by pressing buttons and/or rotating controls.

By pressing buttons (the SOURCE and MODE buttons)



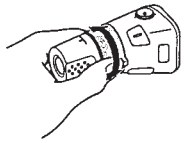
Each time you press (SOURCE), the source changes as follows:
TUNER → CD* → MD* → TAPE

Pressing (MODE) changes the operation in the following ways;
- Tape : playback direction
- Tuner : FM1 → FM2 → FM3 → MW → LW
- CD unit* : CD1 → CD2 → ...
- MD unit* : MD1 → MD2 → ...

* *If the corresponding optional equipment is not connected, the item will not appear.*

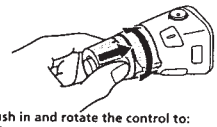
Tip
When the POWER SELECT switch is set to position Ⓐ, you can turn on this unit by pressing (SOURCE) on the rotary commander.

By rotating the control (the SEEK/AMS control)



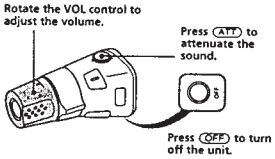
Rotate the control and release it to:
- Locate the beginnings of tracks on the tape. Rotate and hold the control, and release it to fast-wind the tape. To start playback while fast-winding the tape, press (MODE).
- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in stations automatically. Rotate and hold the control to find a specific station.

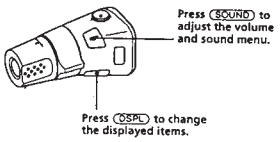
By pushing in and rotating the control (the PRESET/DISC control)



Push in and rotate the control to:
- Receive the stations memorized on the number buttons.
- Change the disc.

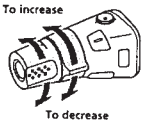
Other operations



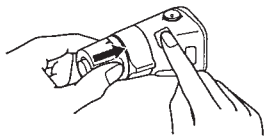


Changing the operative direction

The operative direction of controls is factory-set as shown below.



If you need to mount the rotary commander on the right hand side of the steering column, you can reverse the operative direction.



Press (SOUND) for two seconds while pushing the VOL control.

Tip
You can also change the operative direction of these controls with the unit (see "Changing the sound and display settings" on page 16).

Adjusting the sound characteristics

You can adjust the bass, treble, balance, and fader.
You can store the bass and treble levels independently for each source.

1 Select the item you want to adjust by pressing (SOUND) repeatedly.

VOL (volume) → BAS (bass) →
TRE (treble) → BAL (left-right) →
FAD (front-rear)

2 Adjust the selected item by rotating the dial.

Adjust within three seconds after selecting the item. (After three seconds, the dial function reverts to volume control.)

Attenuating the sound

Press (ATT) on the rotary commander.
"ATT-ON" flashes momentarily.

To restore the previous volume level, press (ATT) again.

Tip
The unit decreases the volume automatically when a telephone call comes in (Telephone ATT function) (XR-C5120R only).

Changing the sound and display settings

The following items can be set:
- CLOCK (page 5).
- CT (Clock Time) (page 13).
- AMBER/GREEN – to change the illumination colour to amber or green.
- BEEP – to turn the beep sound on or off.
- RM (Rotary Commander) – to change the operative direction of the rotary commander.
  — Select "NORM" to use the rotary commander as the factory-set position.
  — Select "REV" when you mount the rotary commander on the right side of the steering column.
- M.DSPL (Motion Display) – to turn the motion display on or off.
- A.SCRL (Auto Scroll)* (page 18).

1 Press (SHIFT).

2 Press (2) (SET UP) repeatedly until the desired item appears.

Each time you press (2) (SET UP), the item changes as follows:

CLOCK → CT → AMBER/GREEN → BEEP → RM → M.DSPL → A.SCRL*

* *When no CD or MD is playing, this item will not appear.*

3 Press (4) (→) to select the desired setting (Example: ON or OFF).

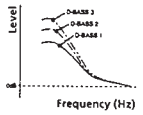
4 Press (SHIFT).
After the mode setting is complete, the display returns to normal playback mode.

Note
If the "SFT" indication appears, press (SHIFT) to complete the mode setting.

Boosting the bass sound

— D-bass .

You can enjoy a clear and powerful bass sound. The D-bass function boosts the low frequency signal with a sharper curve than conventional bass boost.
You can hear the bass line more clearly even while the vocal volume remains the same. You can emphasize and adjust the bass sound easily with the D-BASS control.



Adjusting the bass curve

Turn the D-BASS control to adjust the bass level (1, 2, or 3).
"D-BASS" appears in the display.

To cancel, turn the control to OFF.

Note
If the bass sound becomes distorted, adjust the D-BASS control or volume.

Installation

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are used for tuner adjustments to be made only by service technicians.
- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperatures, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to detach and attach the front panel

Before installing the unit, detach the front panel.

A To detach

Before detaching the front panel, be sure to press (OFF). Press (RELEASE), then slide the front panel a little to the left, and pull it off towards you.

B To attach

Attach part ⓐ of the front panel to part ⓑ of the unit as illustrated and push the left side into position until it clicks.

Instalación

Precauciones

- No toque los cuatro orificios de la superficie superior de la unidad. Estos orificios son para ajustes del sintonizador que solamente deberán realizar técnicos de reparación.
- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire de calefacción, o a polvo, suciedad o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.

Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 20°.

Forma de extraer e instalar el panel frontal

Antes de instalar la unidad, extraiga el panel frontal.

A Para extraerlo

Antes de extraer el panel frontal, asegúrese de pulsar (OFF). Pulse (RELEASE), deslice el panel ligeramente hacia la izquierda y tire de él hacia fuera.

B Para instalarlo

Fije la parte ⓐ del panel frontal a la parte ⓑ de la unidad tal como muestra la ilustración y ejerza presión sobre el lado izquierdo hasta oír un chasquido.

Montering

Säkerhetsföreskrifter

- Låt de fyra hålen på bilstereons ovansida vara. De är till för radiojusteringar som endast får utföras av fackkunniga tekniker.
- Var noga när du väljer var i bilen du monterar bilstereon, så att den inte sitter i vägen när du kör.
- Montera inte bilstereon där den utsätts för värme, t ex solsken eller varmluft, eller där den utsätts för damm, smuts och/eller vibrationer.
- Använd endast de medföljande monteringstillbehören för att vara säker på att bilstereon monteras på ett säkert och korrekt sätt.

Tillåten monteringsvinkel

Monteringsvinkeln får inte vara större än 20 grader.

Ta loss/fästa frontpanelen

Ta loss frontpanelen innan du monterar bilstereon.

A Ta loss frontpanelen

Se till att enheten är avstängd innan du tar bort Frontpanelen. Tryck på (OFF). Tryck sedan på (RELEASE) och skjut frontpanelen lite åt vänster medan du drar den emot dig.

B Fästa frontpanelen

Sätt fast del ⓐ på frontpanelen på del ⓑ på enheten enligt bilden och tryck på den vänstra sidan tills det klickar till.

Instalação

Precauções

- Não toque nos quatro orifícios da superfície da parte superior do aparelho. Estes servem para regulações do sintonizador que devem ser efectuadas somente por técnicos qualificados.
- Escolha com cuidado um local apropriado para a montagem do aparelho, para que este não interfira com as manobras necessárias à condução do veículo.
- Evite instalar o aparelho onde possa estar sujeito a altas temperaturas, como em locais expostos directamente à luz do sol, ao ar quente dos aquecimentos, ou sujeitos a pó, sujidade ou vibração excessiva.
- Para efectuar uma instalação segura utilize unicamente o material de montagem fornecido.

Ajuste do ângulo de montagem

Ajuste o ângulo de montagem a menos de 20°.

Para retirar e colocar o painel frontal

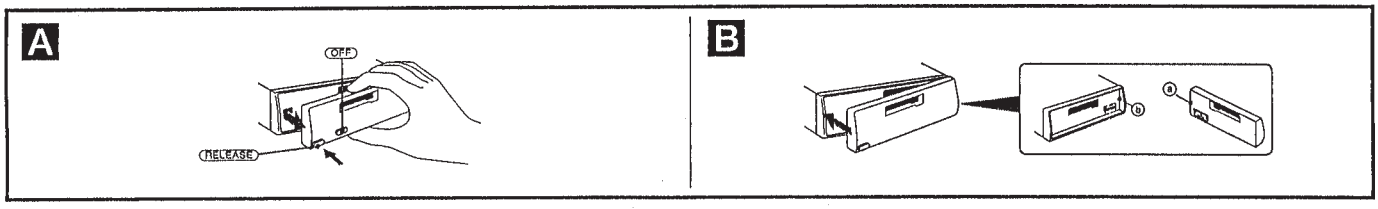
Retire o painel frontal antes de iniciar a instalação do aparelho.

A Para retirar

Antes de retirar o painel frontal, tem de carregar em (OFF). Carregue em (RELEASE), faça deslizar o painel um pouco para a esquerda e puxe-o para si.

B Para colocar

Encaixe a parte ⓐ do painel frontal na parte ⓑ do aparelho, como se mostra na figura, fazendo pressão sobre o painel até ouvir um estalido.

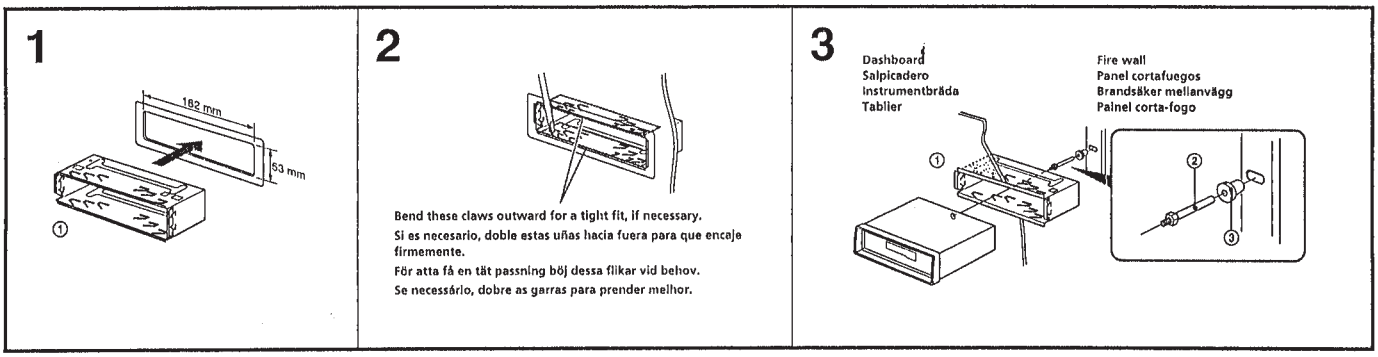


Installation in the dashboard

Instalación en el salpicadero

Montera på instrumentbrädan

Instalação no tablier



Reset button

When the installation and connections are complete, be sure to press the reset button with a ballpoint pen, etc.

Botón de restauración

Cuando finalice la instalación y las conexiones, cerciórese de pulsar el botón de restauración con un bolígrafo, etc.

Återställningsknappen

När du har installerat enheten och alla anslutningar är klara, återställer du den genom att trycka på återställningsknappen med t ex en kulspetspenna.

Botão de reinicialização

Depois de completar a instalação e as ligações, tem de carregar no botão de reinicialização com uma esferográfica ou um objecto semelhante.

Connections

Cautions

- This unit is designed for negative earth 12 V DC operation only.
- Be careful not to pinch any wires between a screw and the body of the car or this unit or between any moving parts such as the seat railing, etc.
- Connect the power connecting cord ⑧ to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all earth wires to a common earth point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in combination with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual components' fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

If your car has no accessory position on the ignition key switch — POWER SELECT switch

The front panel illumination is factory set to be turned on even while the unit is not in use. However, this setting may cause some car battery to wear **If your car has no accessory position on the ignition key switch.** To avoid this battery wear, **set the POWER SELECT switch located on the bottom of the unit to the ⓫ position, then press the reset button.** The illumination is reset to stay off while the unit is not in use.

Notes

- *The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ⓫ position.*
- *Do not use excessive force when changing the POWER SELECT switch.*

Notes of connection example

Notes on the control leads

- *The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation), AF (Alternative Frequency) or the TA (Traffic Announcement) function.*
- *A power aerial without a relay box cannot be used with this unit.*

Warning

If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord ⑧ may damage the aerial.

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Be sure to connect passive speakers to these terminals.*

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Tenga cuidado de no atrapar ningún cable entre algún tornillo y la carrocería del automóvil o esta unidad o entre las partes móviles, como por ejemplo los rafles del asiento, etc.
- Conecte el cable de conexión de alimentación ⑧ a la unidad y los altavoces antes de conectarlo al conector de alimentación auxiliar.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Conecte el cable amarillo a un circuito libre del automóvil de potencia nominal superior a la del fusible de la unidad. Si conecta esta unidad en combinación con otros componentes estéreo, la potencia nominal del circuito del automóvil a los que dichos componentes estén conectados debe ser superior a la suma de la potencia nominal del fusible de los componentes. Si no existen circuitos de automóvil de potencia nominal tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si no hay circuitos de automóvil disponibles para conectar esta unidad, conecte la misma a un circuito de automóvil de potencia nominal superior a la del fusible de la unidad de forma que no se desactiven otros circuitos si el fusible de dicha unidad se funde.

Si el automóvil no dispone de posición para accesorios en la llave de encendido

— Selector POWER SELECT

La iluminación del panel frontal ha sido ajustada en fábrica para que esté activada aunque la unidad no se encuentre en funcionamiento. Sin embargo, este ajuste puede provocar cierta descarga de la batería del automóvil **si éste no dispone de posición para accesorios en la llave de encendido.** Para evitar esto, **ponga el selector POWER SELECT, situado en la base de la unidad, en la posición ⓫ y, después, pulse el botón de restauración.** La iluminación estará desactivada cuando la unidad no se encuentre en funcionamiento.

Notas

- *La alarma de precaución para el panel frontal no se activará si el selector POWER SELECT está ajustado en la posición ⓫.*
- *No emplee excesiva fuerza al cambiar el selector POWER SELECT.*

Notas de ejemplo de conexiones

Notas sobre conductores de control

- *El conductor de control (azul) de la antena motorizada suministra + 12 V CC al activar el sintonizador o la función ATA (activación automática del sintonizador), AF (frecuencias alternativas) o TA (anuncios de tráfico).*
- *Con esta unidad no podrá utilizarse una antena motorizada sin caja de relés.*

Advertencia

Si dispone de una antena motorizada sin dispositivo de relé, la conexión de esta unidad con el cable de conexión de alimentación ⑧ suministrado puede dañar la antena.

Conexión para protección de la memoria

Si conecta el conductor de entrada de alimentación amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición de apagado.

Notas sobre la conexión de los altavoces

- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.*
- *No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.*
- *No intente conectar los altavoces en paralelo.*
- *No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.*

Anslutning

Säkerhetsföreskrifter

- Denna bilstereo är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Var noga med att inga kablar kläms mellan någon skruv eller att de blir klämda mellan rörliga delar som t.ex. bilsätet.
- Anslut strömkabeln ⑧ till enheten och högtalarna innan du ansluter den till den yttre strömanslutningen.
- **Dra samtliga jordledningar till en och samma jordningspunkt.**
- Anslut den gula kabeln till en ledig bilkrets med ett högre amperetal än enhetens. Om du kopplar både denna enhet och andra stereokomponenter till en och samma bilkrets, måste den bilkrets de kopplas till ha en högre ampere än summan av de enskilda delarnas amperestyrka. Om det inte finns några bilkretsar med en så hög amperestyrka som enhetens ska du ansluta enheten direkt till batteriet. Om inga bilkretsar finns för anslutning till enheten ska du ansluta enheten till en bilkrets med ett högre amperetal än enhetens säkring, så att det är denna som går i stället för bilens.

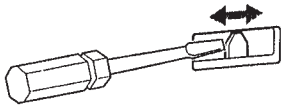
Montera bilstereon i en bil vars tändlås inte har något strömläge

— Omkopplaren POWER SELECT

Innan bilstereon levererades från fabriken ställdes belysningen i teckenfönstret in så att den lyser också när bilstereon inte används. Detta kan emellertid orsaka urladdning av batteriet när du använder bilstereon **i en bil, vars tändlås saknar läget ACC (strömläge). Skjut omkopplaren POWER SELECT på bilstereons undersida till läge ⓫, och tryck sedan på återställningsknappen** för att undvika att bilbatteriet laddas ur. Nu lyser inte längre belysningen i teckenfönstret när bilstereon inte används.

Observera

- *Varningssignalen för frontpanelen ljuder inte när omkopplaren POWER SELECT står i läge ⓫.*
- *Ta inte i för mycket när du ställer om POWER SELECT-omkopplaren.*



Att observera angående anslutningsexemplen

Att observera angående olika styrkablarna

- *Motorantennens styrkabel (blå) leder + 12 volts likström när kanalväljaren slås på eller när radiomottagningsautomatik ATA, mottagning av alternativa frekvenser AF eller mottagning av trafikmeddelanden TA aktiverats.*
- *En motorantenn utan styrreläDosa kan inte anslutas till denna bilstereo.*

Varning

Om du har en motorantenn utan reläDosa kan antennen skadas om du ansluter enheten med den medföljande strömkabeln ⑧.

Anslutning för minnesstöd

När du anslutit den gula, ingående strömkabeln försörjs minneskretsen med ström hela tiden, även när tändläset slås ifrån.

Att observera angående högtalarnas anslutning

- *Slå av bilstereon innan du ansluter högtalarna.*
- *Anslut endast högtalare, vars impedans varierar från 4 till 8 ohm och som har tillräcklig effekthanteringskapacitet för att skydda högtalarna mot skador.*
- *Anslut inte något av högtalaruttagen till bilens chassi. Anslut inte heller uttagen på höger högtalare till uttagen på vänster högtalare.*
- *Anslut inte högtalarna parallellt.*
- *Anslut inte aktiva högtalare (med inbyggda slutsteg) till bilstereons högtalaruttag, eftersom de kan skada de aktiva högtalarna. Var noga med att bara ansluta passiva högtalare till dessa uttag.*

Ligações

Cuidado

- Este aparelho foi concebido para funcionar somente com corrente contínua de 12 V com negativo à massa.
- Tenha cuidado para que os fios não fiquem entalados entre os parafusos e a carroçaria do automóvel ou a caixa do aparelho nem entre as peças móveis, por exemplo, as calhas dos bancos, etc.
- Ligue o cabo de alimentação de corrente ⑧ ao aparelho e aos altifalantes antes de o ligar ao conector de corrente auxiliar.
- **Ligue todos os fios de terra num ponto de massa comum.**
- Ligue o cabo amarelo a um circuito eléctrico livre do automóvel, cuja potência nominal seja superior à dos fusíveis do aparelho. Se ligar este aparelho em série com outros componentes estéreo, a potência nominal do circuito eléctrico do automóvel onde os ligar tem de ser superior à soma da potência nominal dos fusíveis de todos os componentes individuais. Se não houver nenhum circuito eléctrico do automóvel com uma potência nominal tão elevada como a dos fusíveis do aparelho, ligue-o directamente à bateria. Se não estiver disponível nenhum circuito eléctrico do automóvel para ligação deste aparelho, ligue-o a um circuito eléctrico do automóvel com uma potência nominal superior à dos fusíveis do aparelho, de tal modo que, se o aparelho rebentar os fusíveis respectivos, nenhum outro circuito seja cortado.

Se o seu automóvel não estiver equipado com uma chave de ignição com posição acessórios

— Interruptor POWER SELECT

A iluminação do painel frontal é regulada na fábrica para se manter acesa, mesmo quando o aparelho não estiver ligado. No entanto, esta regulação pode provocar a descarga da bateria **se o aparelho for utilizado em automóveis com chave de ignição sem posição acessórios.** Para evitar a descarga da bateria, **regule o interruptor POWER SELECT, situado na base do aparelho, para a posição ⓫. Em seguida, carregue no botão de reinicialização.** A iluminação é regulada para ficar apagada enquanto o aparelho estiver desligado.

Notas

- *O alarme de aviso do painel frontal não é activado se o selector POWER SELECT estiver colocado na posição ⓫.*
- *Não faça demasiada força quando mudar a posição do selector POWER SELECT.*

Notas sobre o exemplo de ligação

Notas sobre os fios de controlo

- *O fio de controlo da antena eléctrica (azul) fornece +12 V CC quando ligar o sintonizador ou quando activar as funções ATA (Activação automática do sintonizador), AF (frequência alternativa) ou TA (informações de trânsito).*
- *Não pode utilizar uma antena eléctrica sem caixa de relé com este aparelho.*

Advertência

Se a antena eléctrica não tiver uma caixa de relé, o facto de ligar este aparelho com o cabo de alimentação ⑧ fornecido, pode provocar danos na antena.

Ligação para alimentação contínua da memória

Quando o fio amarelo de entrada de alimentação for ligado, os circuitos de memória ficarão com alimentação contínua, mesmo se a chave de ignição estiver desligada.

Notas sobre a ligação dos altifalantes

- *Antes de ligar os altifalantes, desligue o aparelho.*
- *Utilize altifalantes com impedância de 4 a 8 ohm, e com capacidade admissível de potência adequada. Caso contrário, os altifalantes poderão sofrer avarias.*
- *Não ligue os terminais do sistema de altifalantes ao chassis do automóvel, e não ligue os terminais do altifalante direito aos terminais do altifalante esquerdo.*
- *Não tente ligar os altifalantes em paralelo.*
- *Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho. Caso o faça, poderá avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar altifalantes passivos a estes terminais.*

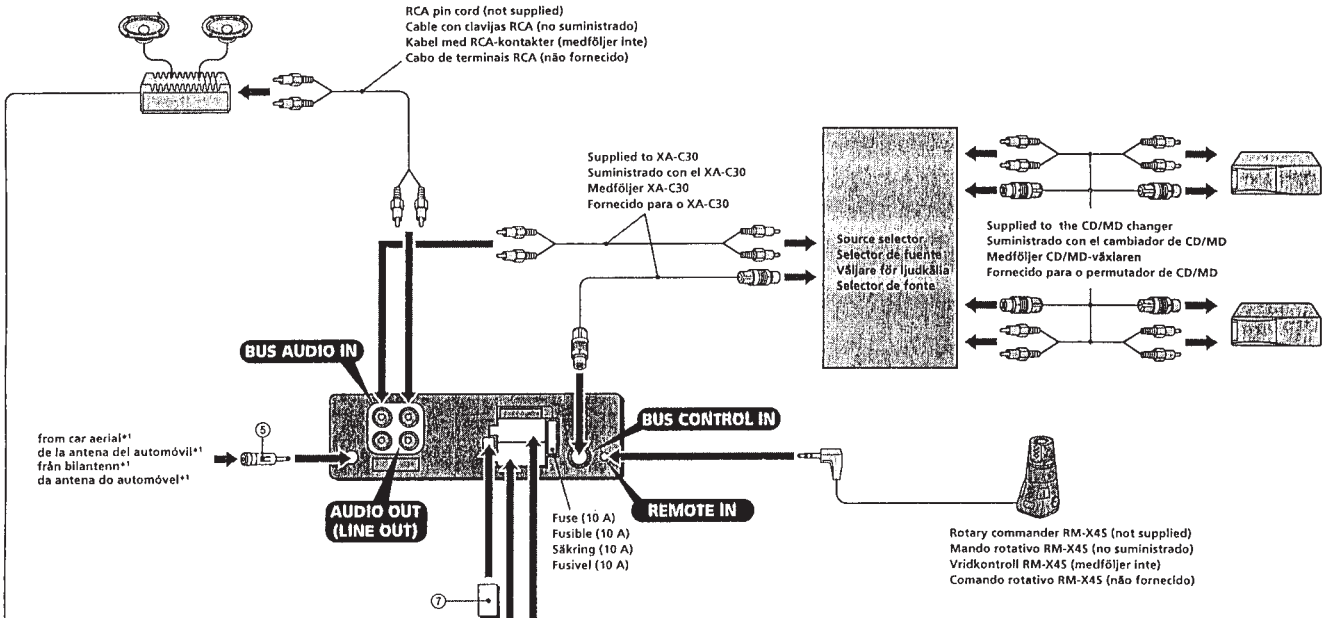
Connection example
Ejemplo de conexiones
Anslutningarna enligt exemplet
Exemplo de ligações

*¹ *Note for the aerial connecting*
If your car aerial is an ISO (International Organization for Standardization) type, use the supplied adapter ⑤ to connect it. First connect the car aerial to the supplied adapter, then connect it to the aerial jack of the master unit.

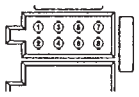
*¹ *Nota sobre la conexión de la antena*
Si la antena del automóvil es del tipo ISO (International Organization for Standardization), emplee el adaptador suministrado ⑤ para conectarla.
En primer lugar, conecte la antena del automóvil al adaptador suministrado y, a continuación, a la toma de antena de la unidad principal.

*¹ *Angående antennanslutning*
Om bilantennen är av ISO-typ (International Organization for Standardization), använder du medföljande adapter ⑤ för att ansluta den.
Anslut först bilantennen till medföljande adapter och därefter till antennuttaget på huvudenheten.

*¹ *Nota referente à ligação da antena*
Se a antena do automóvel for uma antena de tipo ISO (International Organization for Standardization), utilize o adaptador fornecido ⑤ para fazer a ligação respectiva.
Ligue primeiro a antena do automóvel ao adaptador fornecido e depois à ficha tipo jack de antena do sistema principal.



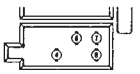
from the car's speaker connector
del conector de altavoz del automóvil
från bilens högtalaranslutning
a partir do conector do altifalante do automóvel



1	+	Speaker, Rear, Right Altavoz, Parte posterior, Derecho Högtalare, Bakre, Höger Altifalante, Parte de trás, Direito	5	+	Speaker, Front, Left Altavoz, Parte frontal, Izquierdo Högtalare, Främre, Vänster Altifalante, Parte da frente, Esquerdo
2	–	Speaker, Rear, Right Altavoz, Parte posterior, Derecho Högtalare, Bakre, Höger Altifalante, Parte de trás, Direito	6	–	Speaker, Front, Left Altavoz, Parte frontal, Izquierdo Högtalare, Främre, Vänster Altifalante, Parte da frente, Esquerdo
3	+	Speaker, Front, Right Altavoz, Parte frontal, Derecho Högtalare, Främre, Höger Altifalante, Parte da frente, Direito	7	+	Speaker, Rear, Left Altavoz, Parte posterior, Izquierdo Högtalare, Bakre, Vänster Altifalante, Parte de trás, Esquerdo
4	–	Speaker, Front, Right Altavoz, Parte frontal, Derecho Högtalare, Främre, Höger Altifalante, Parte da frente, Direito	8	–	Speaker, Rear, Left Altavoz, Parte posterior, Izquierdo Högtalare, Bakre, Vänster Altifalante, Parte de trás, Esquerdo

Negative polarity positions 2, 4, 6, and 8 have striped cords.
Las posiciones de polaridad negativa 2, 4, 6 y 8 tienen cables con raya.
De negativa polpositionerna 2, 4, 6 och 8 har randiga kablar.
As posições 2, 4, 6 e 8 (polaridade negativa) têm cabos às riscas.

from the car's power connector
del conector de alimentación del automóvil
från bilens strömanslutning
a partir do conector de alimentação do automóvel



4*²	continuous power supply suministro de alimentación continua kontinuerlig strömförsörjning alimentação de corrente contínua		7*²	switched power supply suministro conmutado de alimentación switchad strömförsörjning alimentação de corrente comutada	
5	power aerial control control de antena motorizada motorantenn antena eléctrica		8	earth toma de tierra jord Terra	

Positions 1, 2, 3 and 6 do not have pins.
Las posiciones 1, 2, 3 y 6 no disponen de pines.
Positionerna 1, 2, 3 och 6 saknar stift.
As posições 1, 2, 3 e 6 não têm pinos.

***² WARNING**
Auxiliary power connectors may vary depending on the car. Be sure to check the power connection diagram sheet supplied with the unit. Improper connections may damage your car. If the supplied power connecting cord can not be used with your car, consult your nearest Sony dealer.

***² ADVERTENCIA**
Los conectores de alimentación auxiliar pueden variar en función del automóvil. Asegúrese de consultar el diagrama de conexión de alimentación suministrado con la unidad. Las conexiones incorrectas pueden dañar el automóvil. Si no es posible utilizar con el automóvil el cable de conexión de alimentación suministrado, póngase en contacto con el proveedor Sony más próximo.

***² VARNING**
Typen av yttre strömanslutning varierar från bil till bil. Kontrollera strömanslutningsschemat som medföljer enheten så att du ansluter på rätt sätt. Felaktig anslutning kan skada bilen. Kontakta närmaste Sony-återförsäljare om den medföljande strömkabeln inte passar till din bil.

***² ATENÇÃO**
Os conectores de corrente auxiliares podem variar de carro para carro. Não se esqueça de verificar o diagrama de ligação de corrente fornecido com o aparelho. As ligações mal executadas podem danificar o seu carro. Se não puder utilizar o cabo de alimentação fornecido no seu carro, contacte o agente Sony da sua zona.

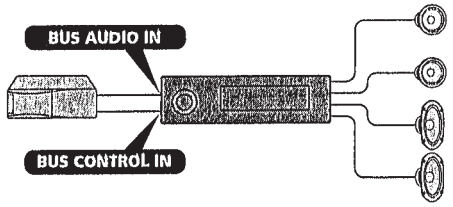
Connection diagram
Diagrama de conexiones
Kopplingsschema
Diagrama de ligações

Equipment used in illustrations (not supplied)
Equipo utilizado en las ilustraciones (no suministrado)
Utrustning som visas i illustrationer (medföljer inte)
Equipamento utilizado nas ilustrações (não fornecido)

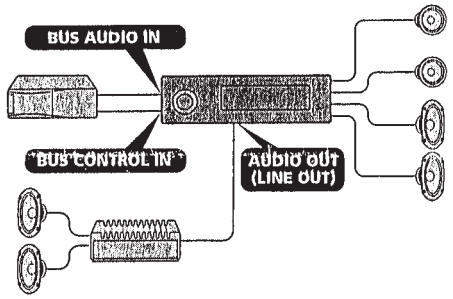
- Front speaker / Altavoz delantero / Främre högtalare / Altifalante dianteiro
- Rear speaker / Altavoz trasero / Bakre högtalare / Altifalante traseiro
- Power amplifier / Amplificador de potencia / Effektförstärkare / Amplificador de potência
- CD/MD changer / Cambiador de CD/MD / CD/MD-skivväxlare / Permutador CD/MD

For connecting two or more changers, the source selector XA-C30 (optional) is necessary.
Si desea conectar dos o más cambiadores, necesitará el selector de fuente XA-C30 (opcional).
För anslutning av två eller flera växlare krävs väljaren XA-C30 (tillval).
Para ligar um ou mais permutadores, é necessário o selector de fonte XA-C30 (opcional).

A



B



Notes
- *Be sure to connect the earth cord before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

Notas
- *Asegúrese de conectar primero el cable de puesta a masa antes de realizar la conexión al amplificador.*
- *Si conecta un amplificador de potencia opcional y no utiliza el incorporado, los pitidos se desactivarán.*

Observera
- *Var noga med att först ansluta jorden, innan du ansluter förstärkaren.*
- *Om du väljer att använda en annan förstärkare i stället för den inbyggda, kommer ljudsignalen att avaktiveras.*

Notas
- *Antes de fazer a ligação ao amplificador tem de ligar primeiro o cabo de ligação à massa.*
- *Se ligar um amplificador de potência opcional e não utilizar o amplificador integrado, desactiva o sinal sonoro.*

Caution

Cautionary notice for handling the bracket ①.
Handle the bracket carefully to avoid injuring your fingers.

Precaución

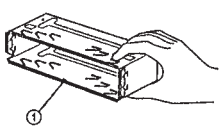
Advertencia sobre la manipulación del soporte ①.
Tenga mucho cuidado al manipular el soporte para evitar posibles lesiones en los dedos.

Säkerhetsföreskrifter

Att observera angående konsolen ①.
Hantera konsolen med största aktsamhet så att du inte skadar fingrarna.

Cuidado

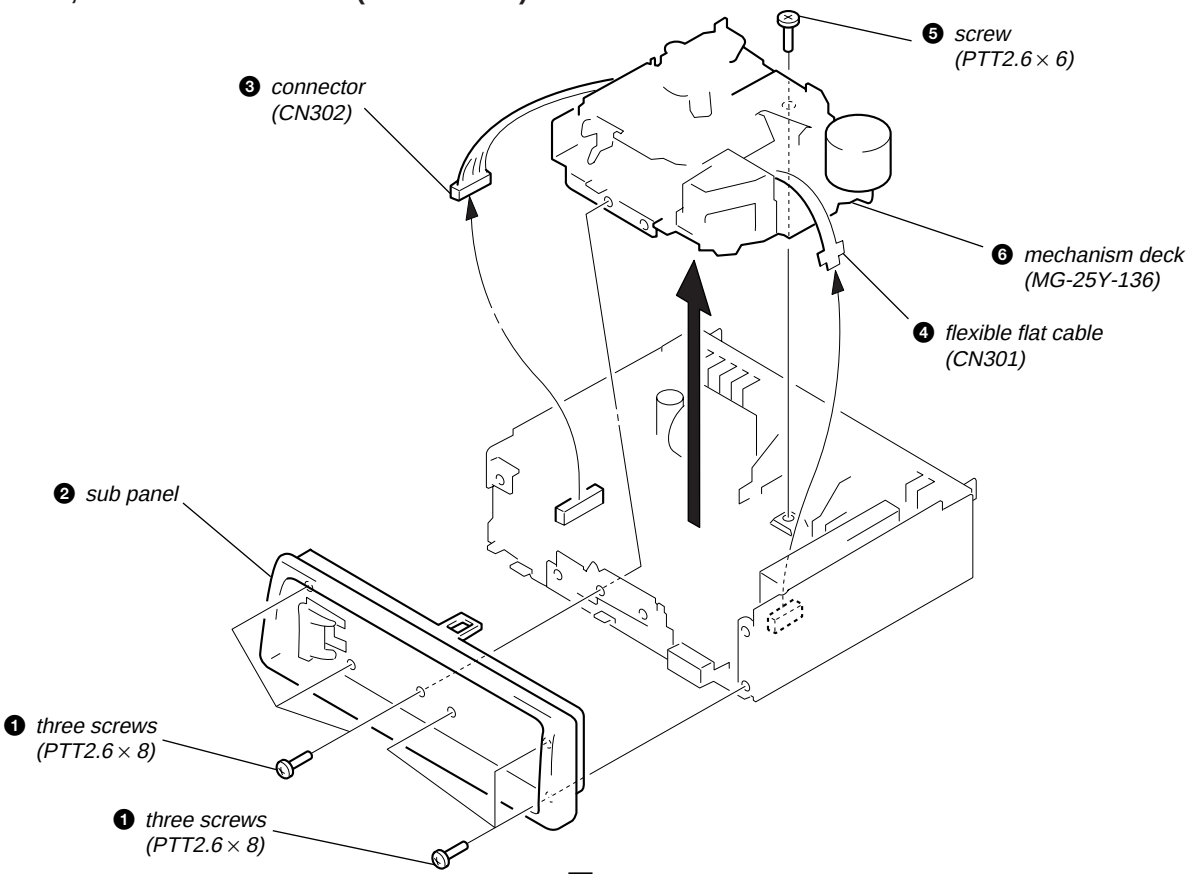
Aviso sobre as precauções a tomar no manuseamento do suporte ①.
Pegue no suporte com cuidado para não magoar os dedos.



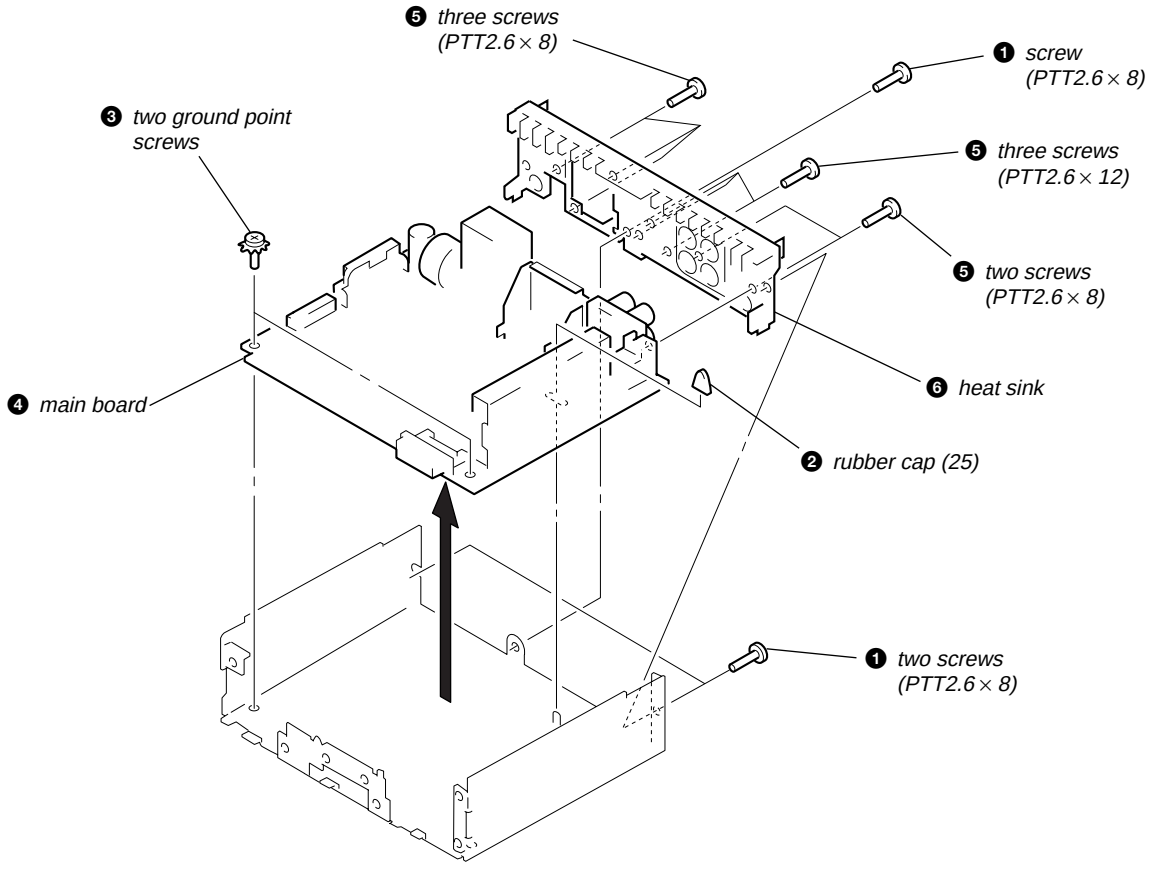
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

SUB PANEL, MECHANISM DECK (MG-25Y-136)



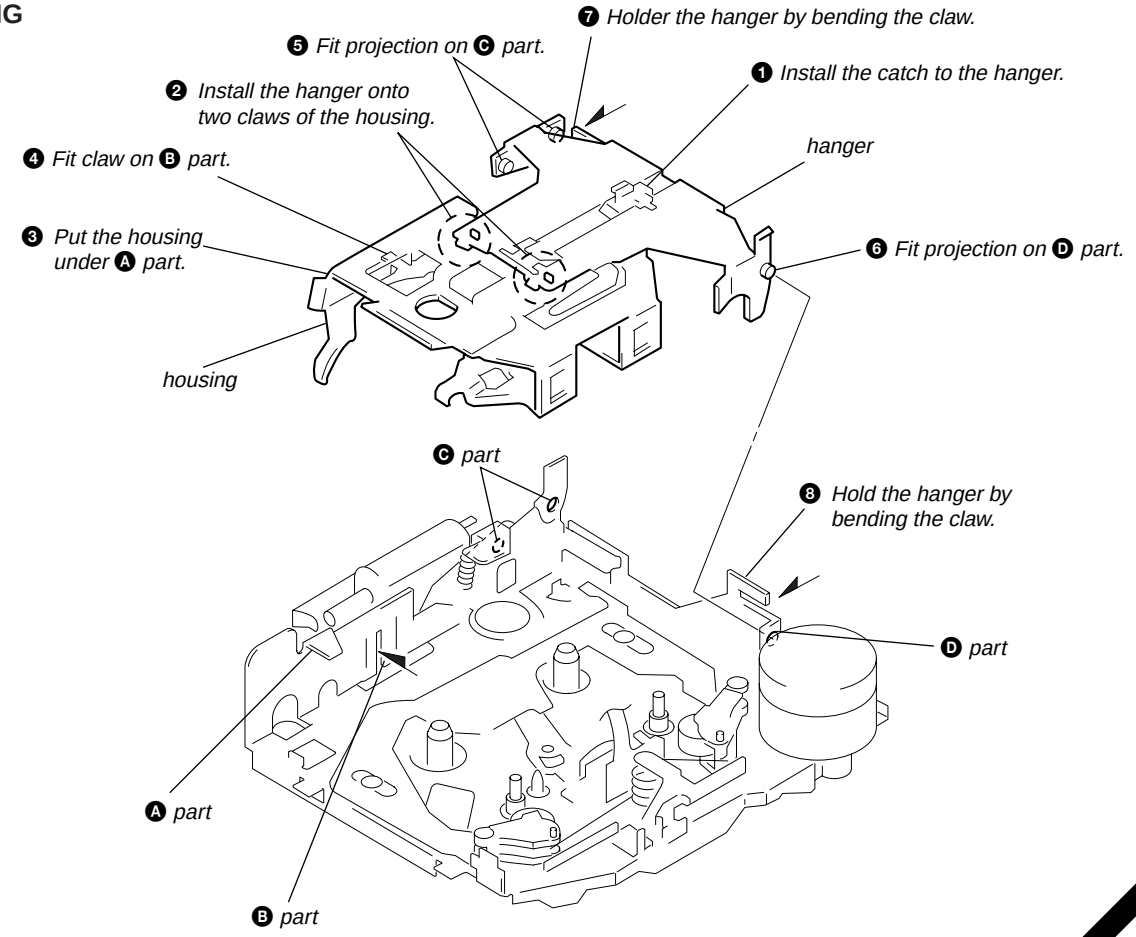
MAIN BOARD, HEAT SINK



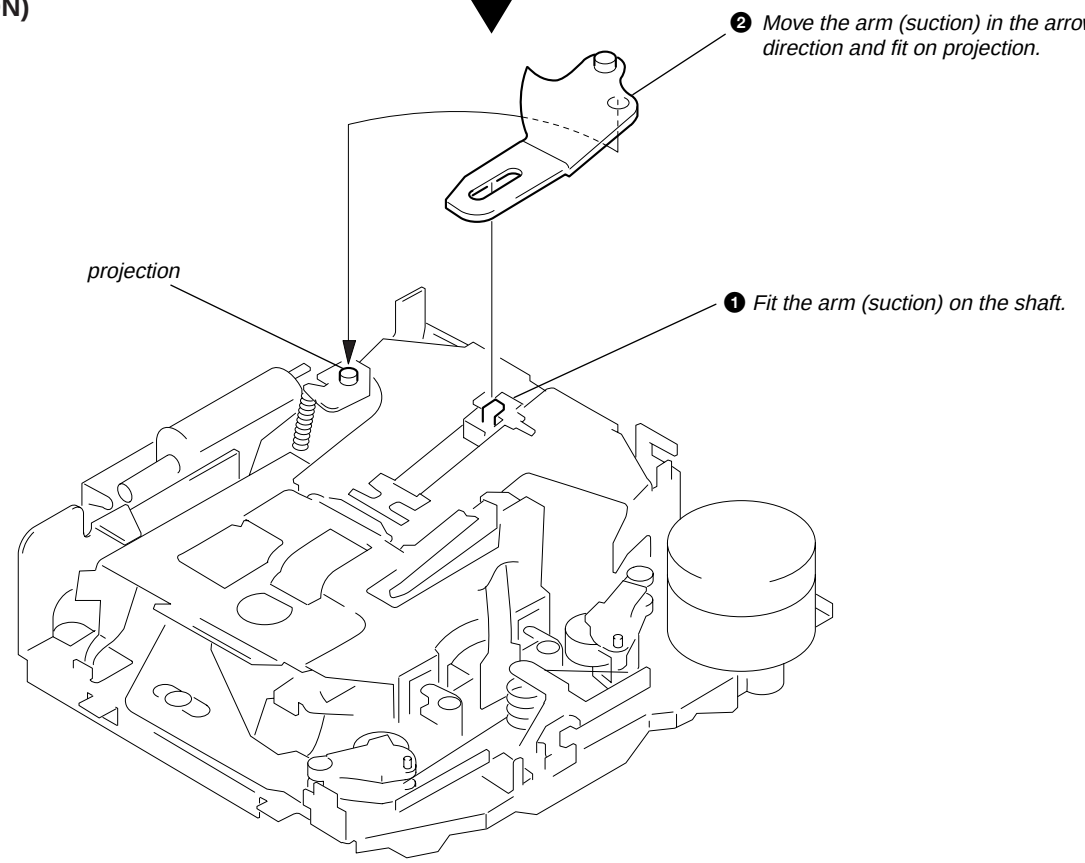
SECTION 3
ASSEMBLY OF MECHANISM DECK

Note: Follow the assembly procedure in the numerical order given.

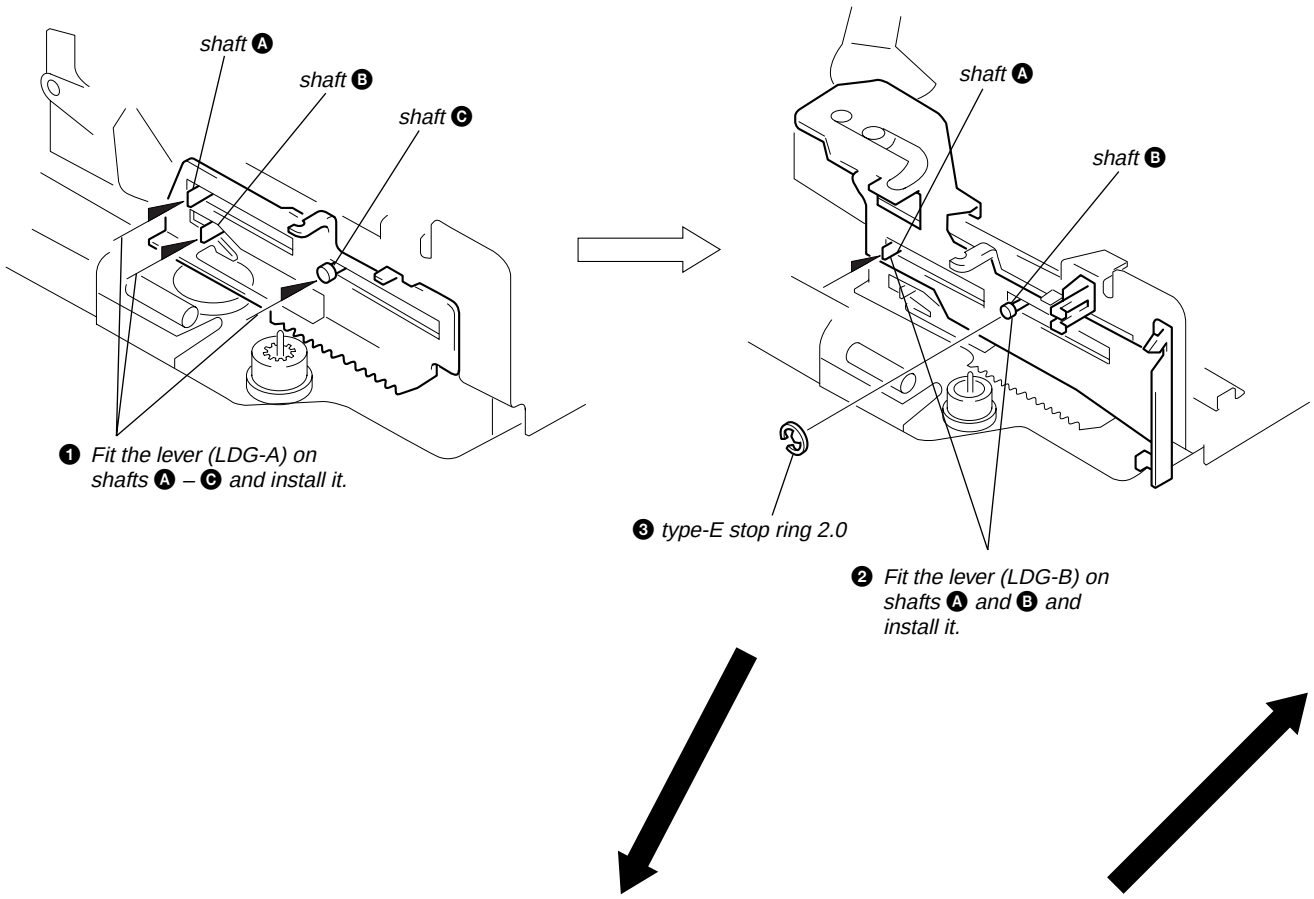
HOUSING


❼ Holder the hanger by bending the claw.
❺ Fit projection on Ⓒ part.
❶ Install the catch to the hanger.
❷ Install the hanger onto two claws of the housing.
hanger
❹ Fit claw on Ⓑ part.
❸ Put the housing under Ⓐ part.
❻ Fit projection on Ⓓ part.
housing
Ⓒ part
❽ Hold the hanger by bending the claw.
Ⓓ part
Ⓐ part
Ⓑ part

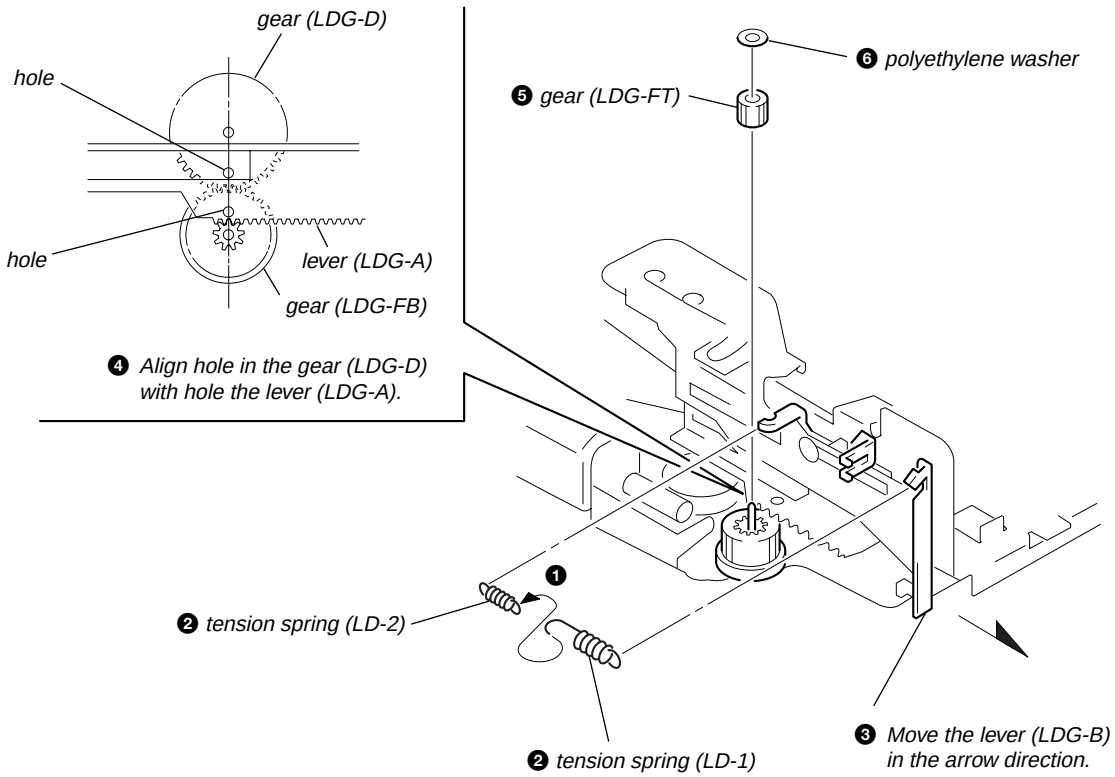
ARM (SUCTION)



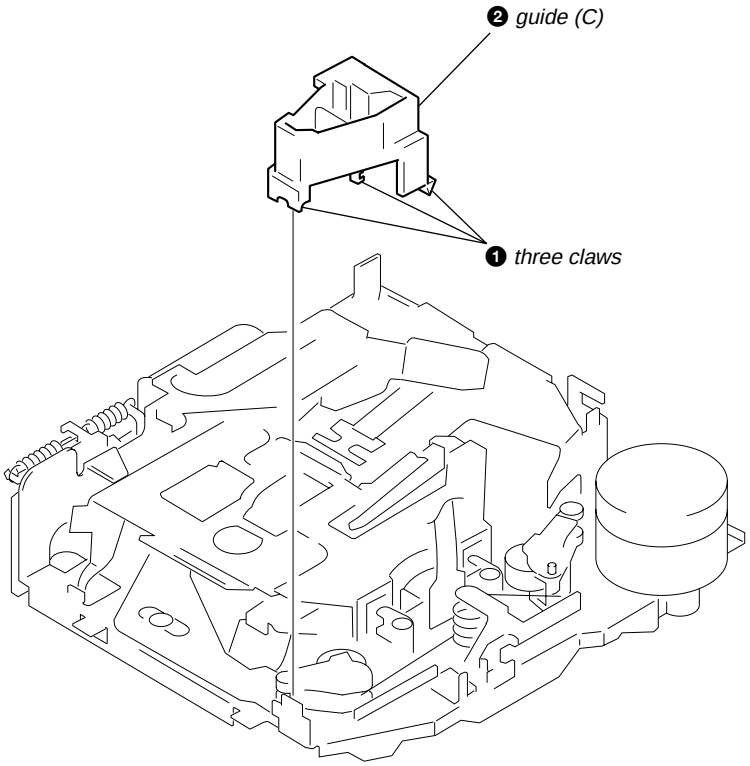
LEVER (LDG-A)/(LDG-B)


shaft Ⓐ
shaft Ⓑ
shaft Ⓒ
❶ Fit the lever (LDG-A) on shafts Ⓐ – Ⓒ and install it.
shaft Ⓐ
shaft Ⓑ
❸ type-E stop ring 2.0
❷ Fit the lever (LDG-B) on shafts Ⓐ and Ⓑ and install it.

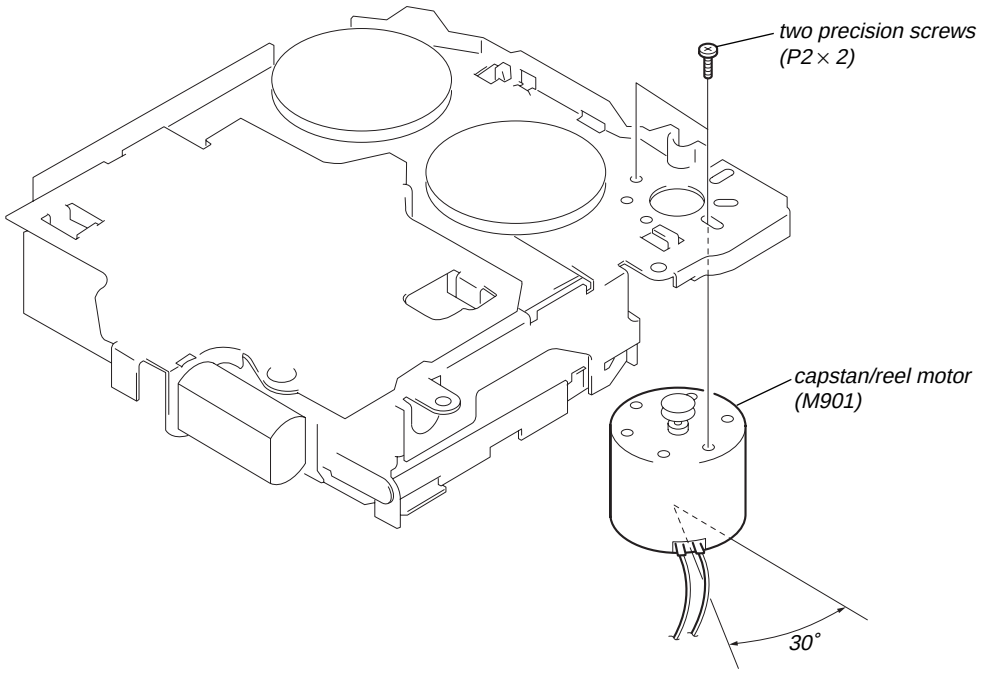
GEAR (LDG-FT)



GUIDE (C)



MOUNTING POSITION OF CAPSTAN/REEL MOTOR (M901)



SECTION 4
MECHANICAL ADJUSTMENTS

1. Clean the following parts with a denatured-alcohol-moistened swab:
   playback head pinch roller
   rubber belt capstan
   idler
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the power supply voltage unless otherwise noted.

• Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	30 – 65 g•cm (0.42 – 0.90 oz•inch)
Forward Back Tension	CQ-102C	0.5 – 4.5g•cm (0.01 – 0.06 oz•inch)
Reverse	CQ-102RC	30 – 65 g•cm (0.42 – 0.90 oz•inch)
Reverse Back Tension	CQ-102RC	0.5 – 4.5g•cm (0.01 – 0.06 oz•inch)
FF, REW	CQ-201B	60 – 200 g•cm (0.83 – 2.78 oz•inch)

• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 90 g (more than 3.18 oz)
Reverse	CQ-403R	more than 90 g (more than 3.18 oz)

SECTION 5
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and AM (MW) Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

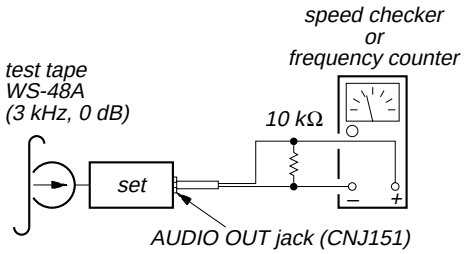
<Set the Test Mode>
1. Set the "power select" switch (S501) is "A (ON)" position.
2. Turn ON the regulated power supply. (All LEDs on the set lights up, and the clock is displayed.)
   Note: Press the [OFF] button, if the clock is not displayed.
3. Push the preset [4] button.
4. Push the preset [5] button.
5. Press the preset [1] button for more than two seconds.
6. Then the display indicates all lights, the test mode is set.

<Release the Test mode>
1. Push the [OFF] button.
2. Return the "power select" switch (S501) to initially set position.

See the adjustment location from on page 17 for the adjustment.

TAPE DECK SECTION | 0 dB=0.775 V

Tape Speed Adjustment
Setting:



Procedure:
1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the speed checker or frequency counter becomes in specification.

Specification: Constant speed

Speed checker	Frequency counter
–1.5 to +2.5%	2,955 to 3,075 Hz

Adjustment Location: See page 17.

TUNER SECTION

0 dB=1 µV

Cautions during repair

When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

Note:

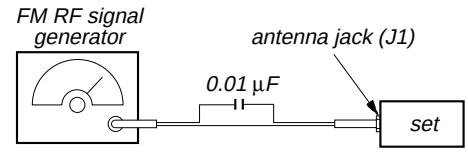
Adjust the tuner section in the sequence shown below.

1. FM Auto Scan/Stop Level Adjustment
2. FM Stereo Separation Adjustment
3. FM RDS S Meter Adjustment
4. AM (MW) Auto Scan/Stop Level Adjustment

FM Auto Scan/Stop Level Adjustment

Setting:

SOURCE button: FM



Carrier frequency : 98.0 MHz
Output level : 22 dB (12.6 µV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

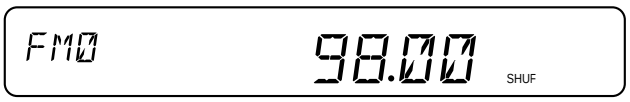
Procedure:

1. Set to the test mode. (See page 14)
2. Push the SOURCE button and set to FM.

Display

3. Adjust with the volume RV2 on TU1 so that the “FM” indication turns to “FM0” indication on the display window.
   But, in case of already indicated “FM0”, turn the RV2 so that put out light “0” indication and adjustment.

Display

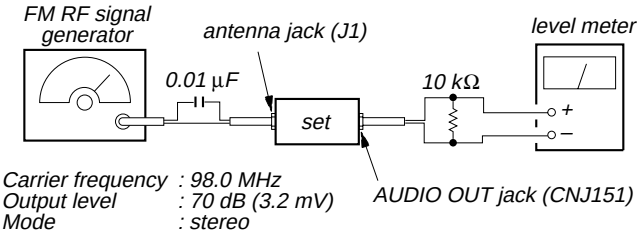


Adjustment Location: See page 17.

FM Stereo Separation Adjustment

Setting:

SOURCE button: FM



Carrier frequency : 98.0 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main: 1 kHz, 20 kHz deviation (26.7%)
sub: 1 kHz, 20 kHz deviation (26.7%)
19 kHz pilot: 7.5 kHz deviation (10%)

Procedure:

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 on TU1 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 on TU1 for minimum reading.

L-CH Stereo separation: Ⓐ-Ⓑ
R-CH Stereo separation: Ⓒ-Ⓓ
The separations of both channels should be equal.

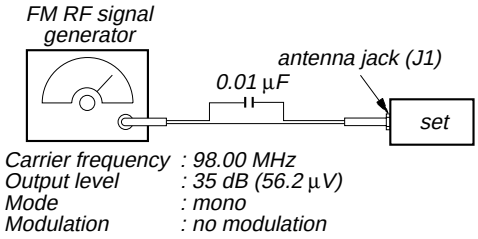
Specification: Separation more than 30 dB

Adjustment Location: See page 17.

FM RDS S Meter Adjustment

Setting:

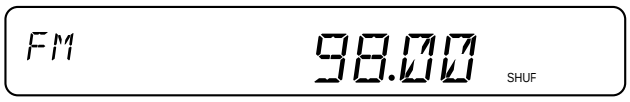
SOURCE button: FM



Procedure:

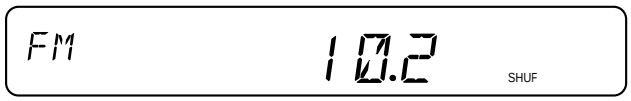
1. Set to the test mode. (See page 14)
2. Push the SOURCE button and set to FM.

Display



3. Push the 6 button.
4. Adjust RV1 so that the display indication is “10.2”.

Display



Specification: Display indication: 10.0 to 10.4

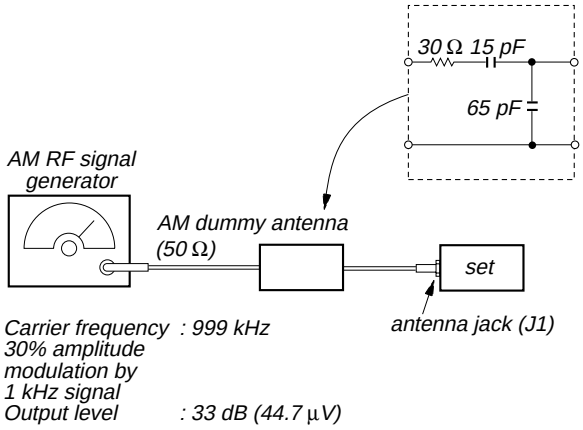
Adjustment Location: See page 17.

AM (MW) Auto Scan/Stop Level Adjustment

Make this adjustment after “FM Auto Scan/Stop Level Adjustment”.

Setting:

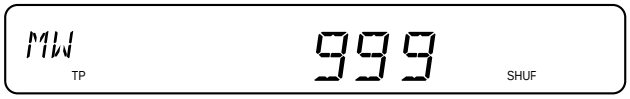
SOURCE button: MW


30 Ω 15 pF
65 pF
AM RF signal generator
AM dummy antenna (50 Ω)
set
antenna jack (J1)
Carrier frequency : 999 kHz
30% amplitude modulation by 1 kHz signal
Output level : 33 dB (44.7 µV)

Procedure:

1. Set to the test mode. (See page 14)
2. Push the SOURCE button and set to FM.
3. Push the MODE button and set to MW.

Display



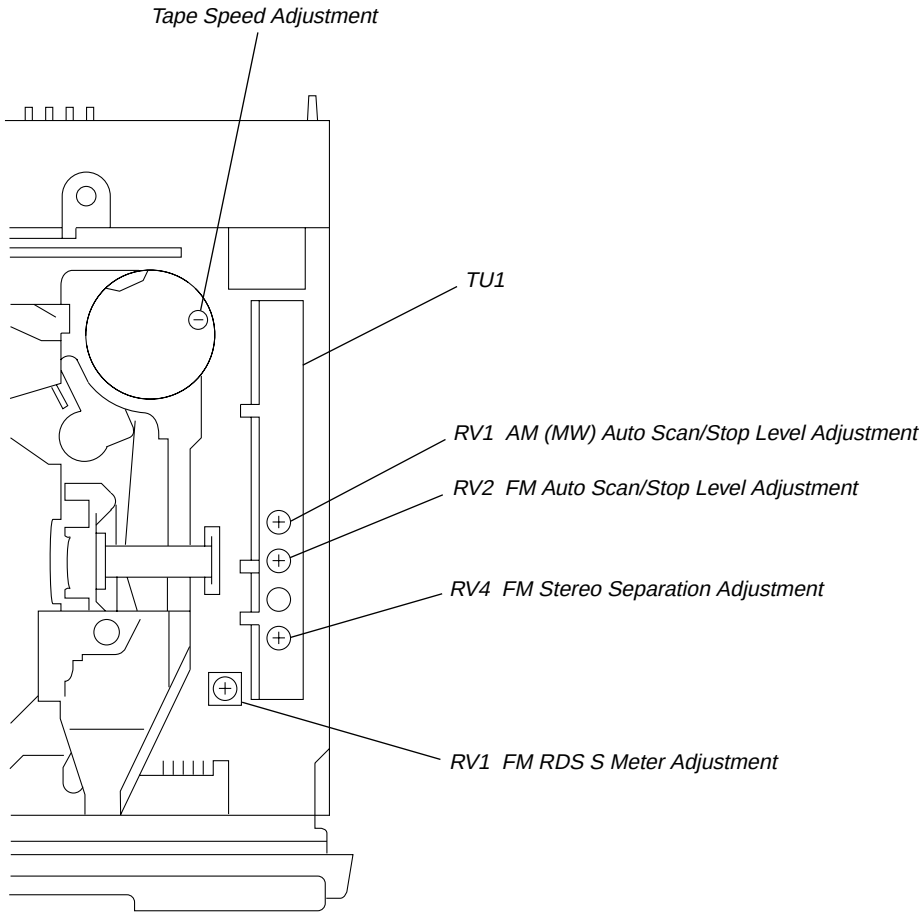
4. Adjust with the volume RV1 on TU1 so that the “MW” indication turns to “MW0” indication on the display window. But, in case of already indicated “MW0”, turn the RV1 so that put out light “0” indication and adjustment.

Display

Adjustment Location: See page 17.

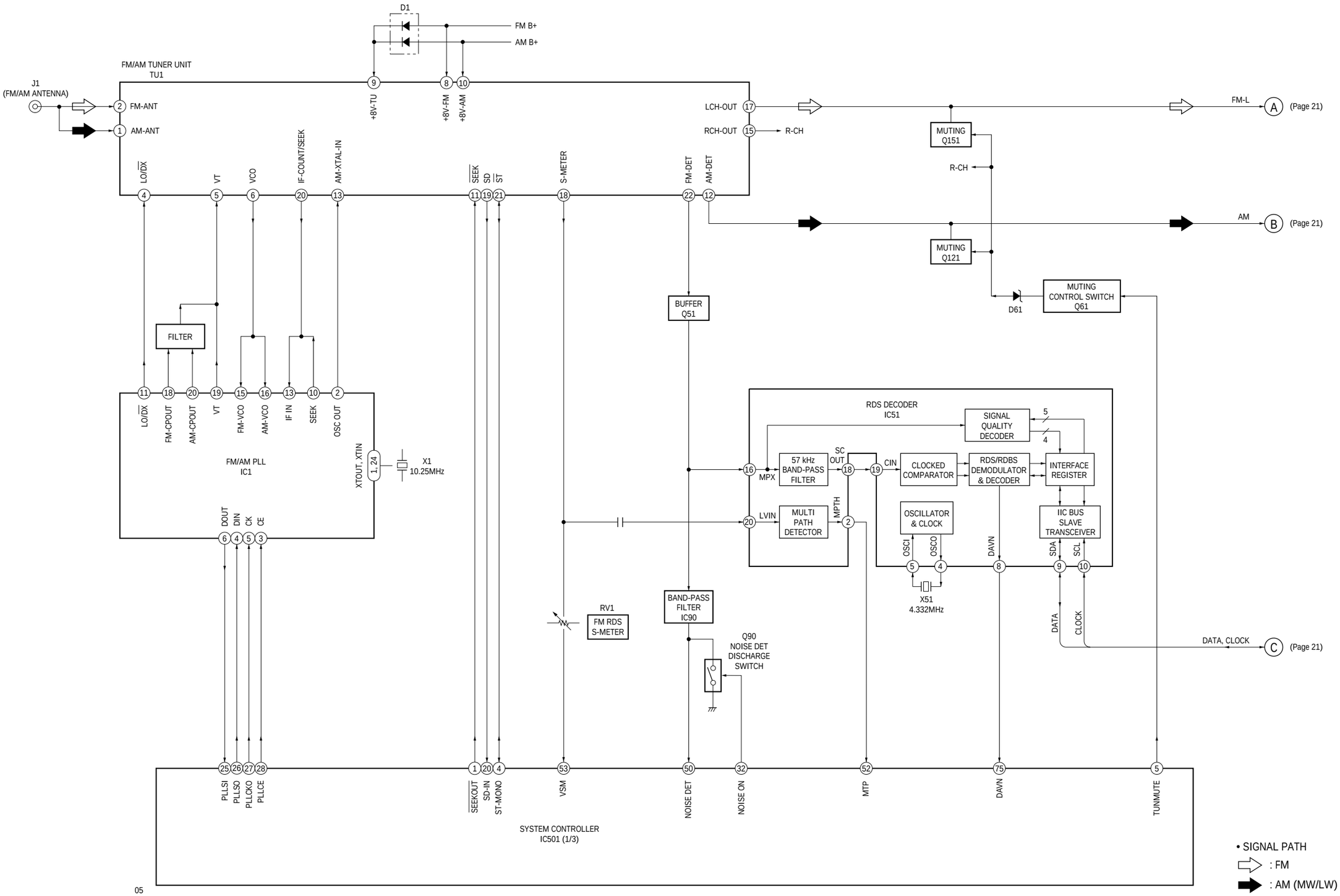
Adjustment Location:

– SET UPPER VIEW –

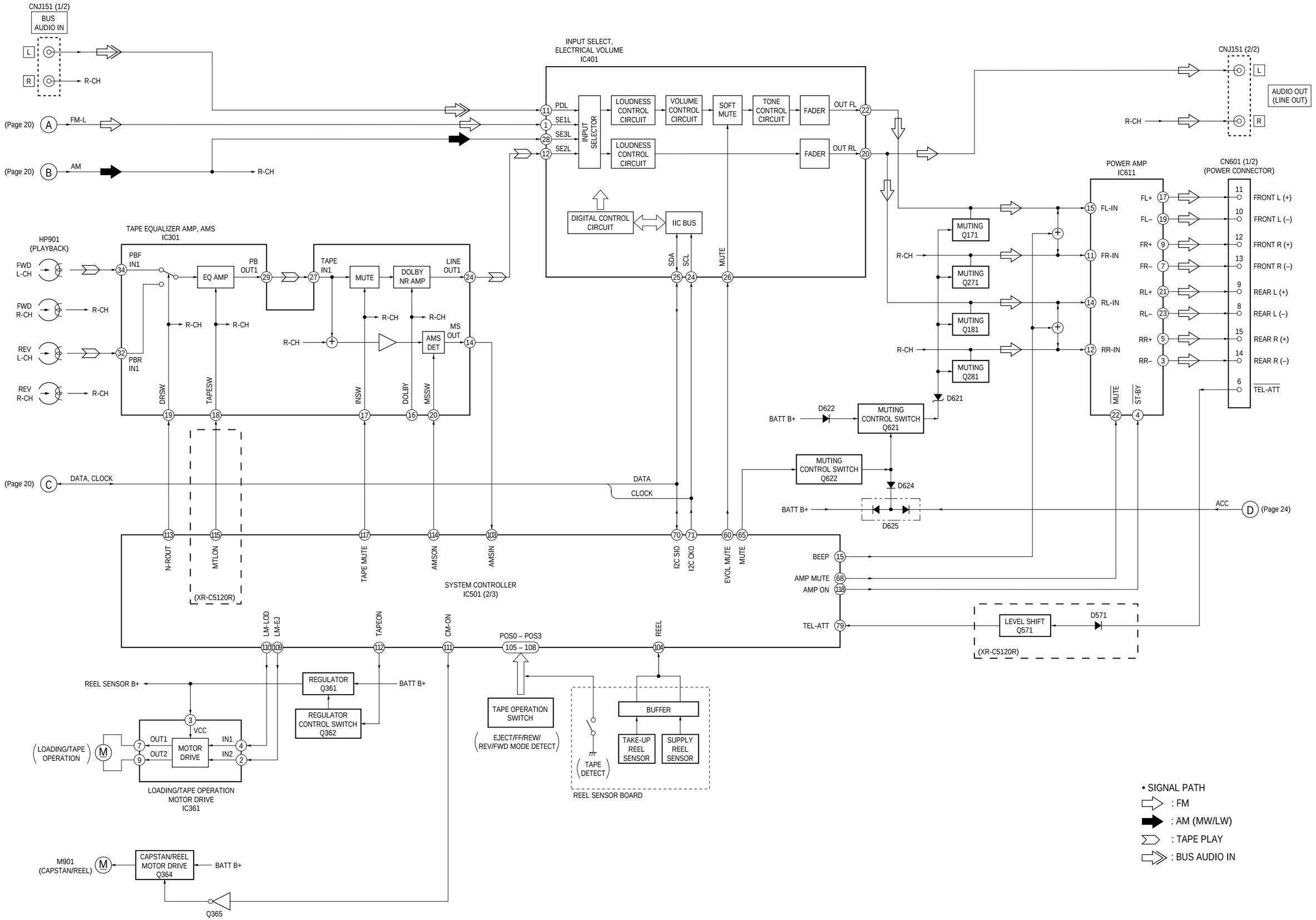

Tape Speed Adjustment
TU1
RV1 AM (MW) Auto Scan/Stop Level Adjustment
RV2 FM Auto Scan/Stop Level Adjustment
RV4 FM Stereo Separation Adjustment
RV1 FM RDS S Meter Adjustment

SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM – TUNER Section –

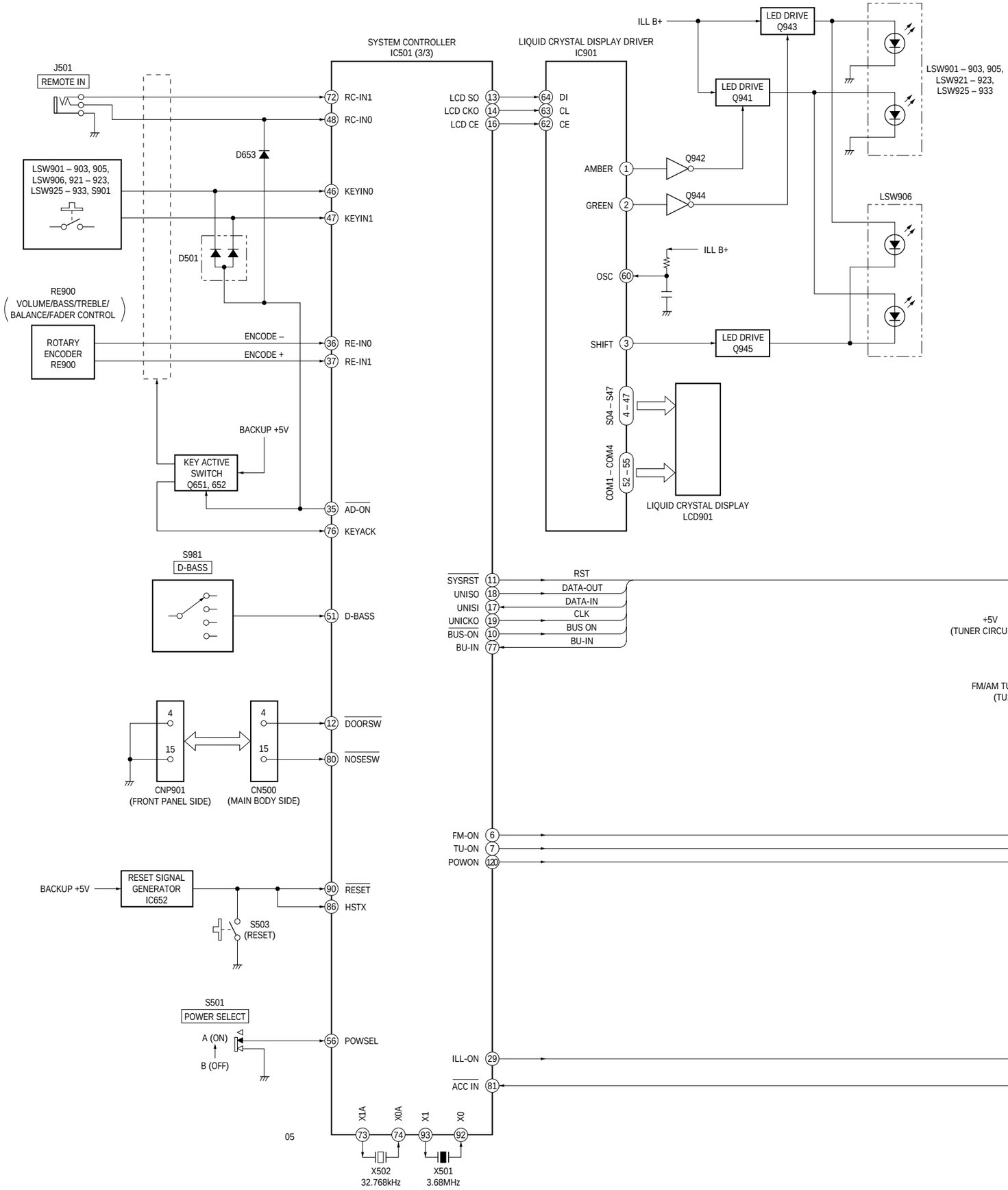


6-2. BLOCK DIAGRAM – TAPE/MAIN Section –



05

6-3. BLOCK DIAGRAM – DISPLAY/KEY CONTROL/BUS CONTROL/POWER SUPPLY Section –



6-4. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- X : parts extracted from the component side.
- Y : parts extracted from the conductor side.
- b : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

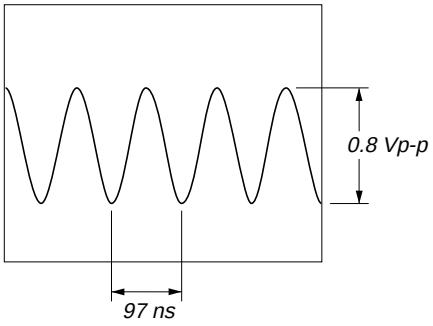
Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- C : panel designation.
- U : B+ Line.
- H : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM (MW/LW)
  ⟨⟨ ⟩⟩ : TAPE PLAYBACK
  ∗ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  F : FM
  f : AM (MW/LW)
  L : BUS AUDIO IN
  E : TAPE PLAYBACK

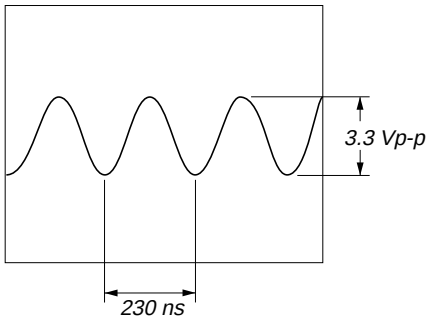
• **Waveforms**

– MAIN Board –

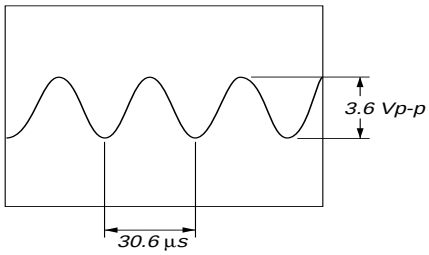
❶ IC1 ② (OSC OUT)



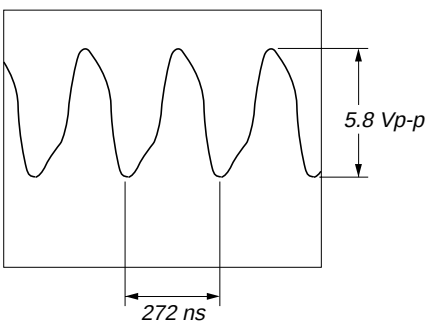
❷ IC51 ⑤ (OSCI)



❸ IC501 ⑭ (XOA)

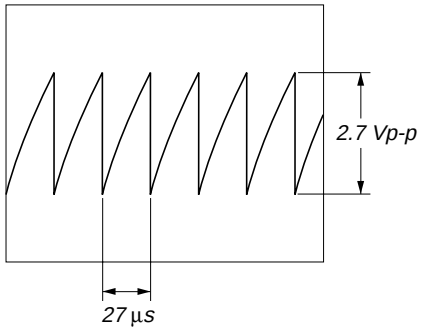


❹ IC501 ⑨③ (X1)



– KEY Board –

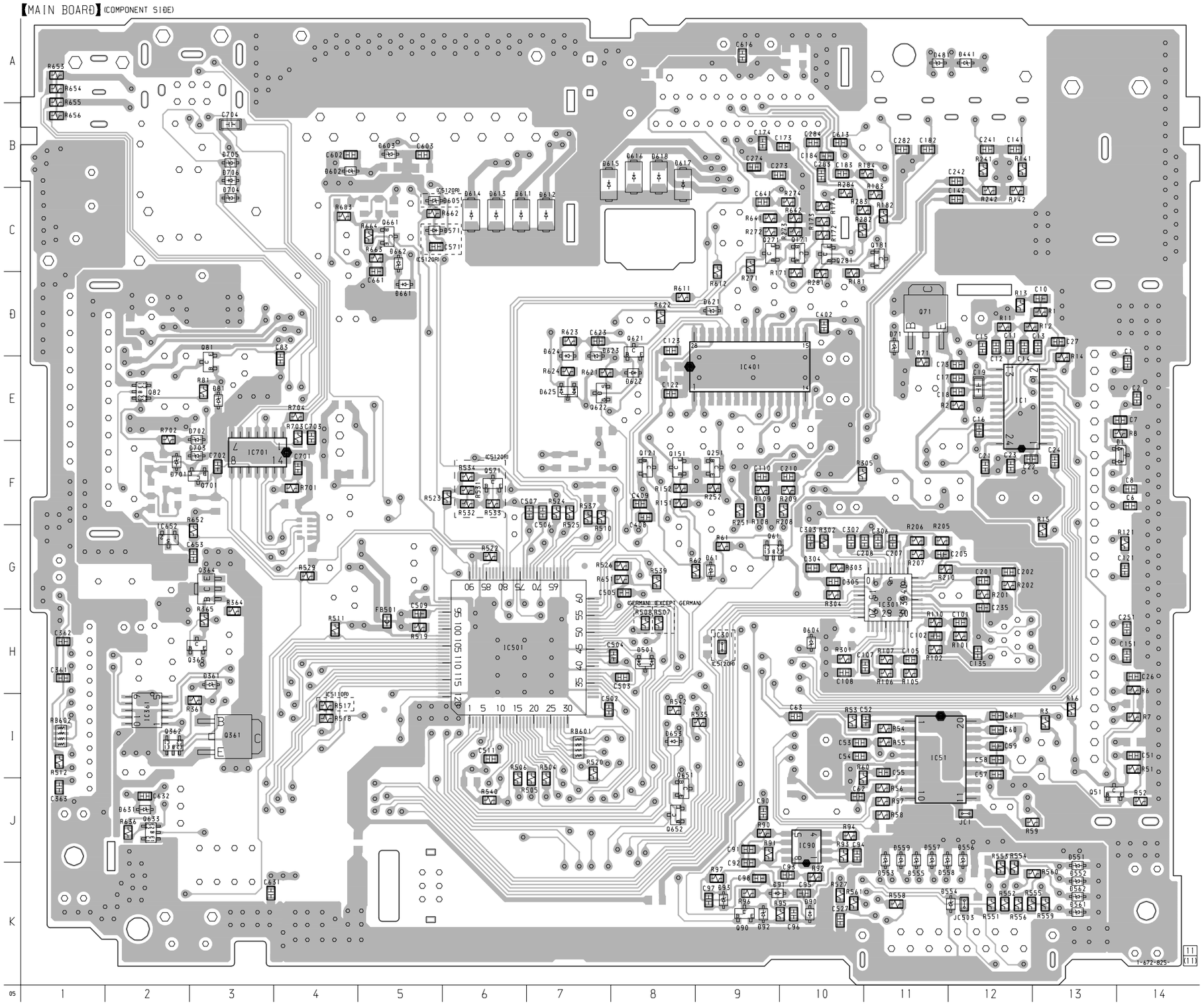
❶ IC901 ⑥⓪ OSC



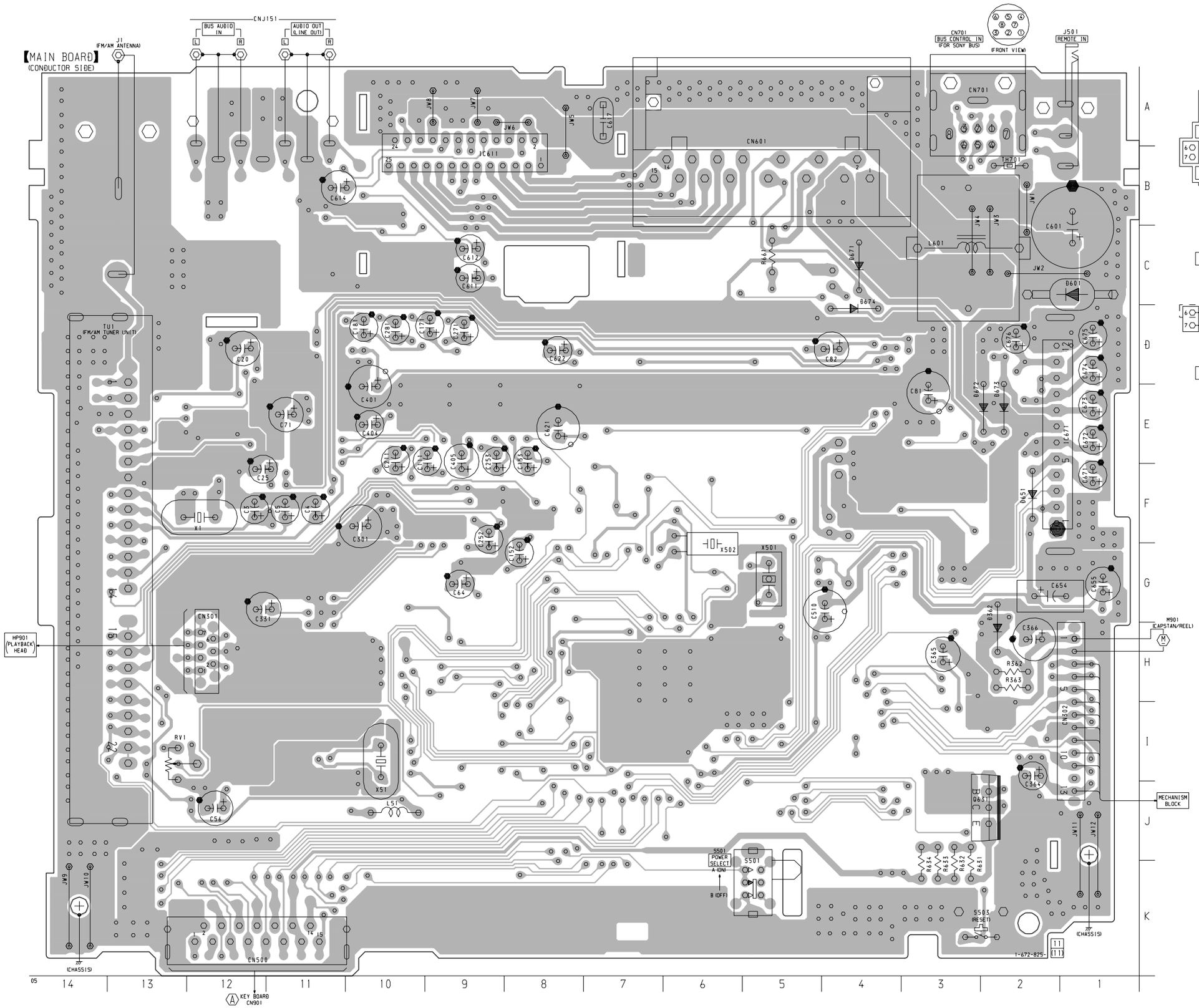
6-5. PRINTED WIRING BOARD – MAIN Board (Component Side) –

- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D1	F-14	D662	C-5
D61	G-9	D701	F-2
D71	D-11	D702	E-3
D81	E-3	D703	F-3
D90	K-10	D704	C-3
D91	K-9	D705	B-3
D92	K-9	D706	B-3
D93	K-9		
D361	H-3	IC1	E-12
D441	A-12	IC51	I-11
D481	A-11	IC90	J-10
D501	H-8	IC301	G-11
D551	K-13	IC361	I-2
D552	K-13	IC401	E-9
D553	J-11	IC501	H-6
D554	K-12	IC652	G-2
D555	J-11	IC701	F-3
D556	J-12		
D557	J-11	Q51	J-13
D558	J-11	Q61	G-9
D559	J-11	Q71	D-11
D561	K-13	Q81	E-3
D562	K-13	Q82	E-2
D571	C-5	Q90	K-9
D602	B-4	Q121	F-8
D603	B-5	Q151	F-8
D604	H-10	Q171	C-10
D605	C-5	Q181	C-11
D611	C-6	Q251	F-9
D612	C-7	Q271	C-9
D613	C-6	Q281	C-10
D614	C-6	Q361	I-3
D615	B-7	Q362	I-2
D616	B-8	Q364	G-3
D617	B-8	Q365	H-3
D618	B-8	Q571	F-6
D621	D-9	Q621	D-8
D622	E-8	Q622	E-7
D623	D-7	Q633	J-2
D624	D-7	Q651	J-8
D625	E-7	Q652	J-8
D631	J-2	Q661	C-5
D653	I-8	Q701	F-3
D661	D-5		



6-6. PRINTED WIRING BOARD – MAIN Board (Conductor Side) –



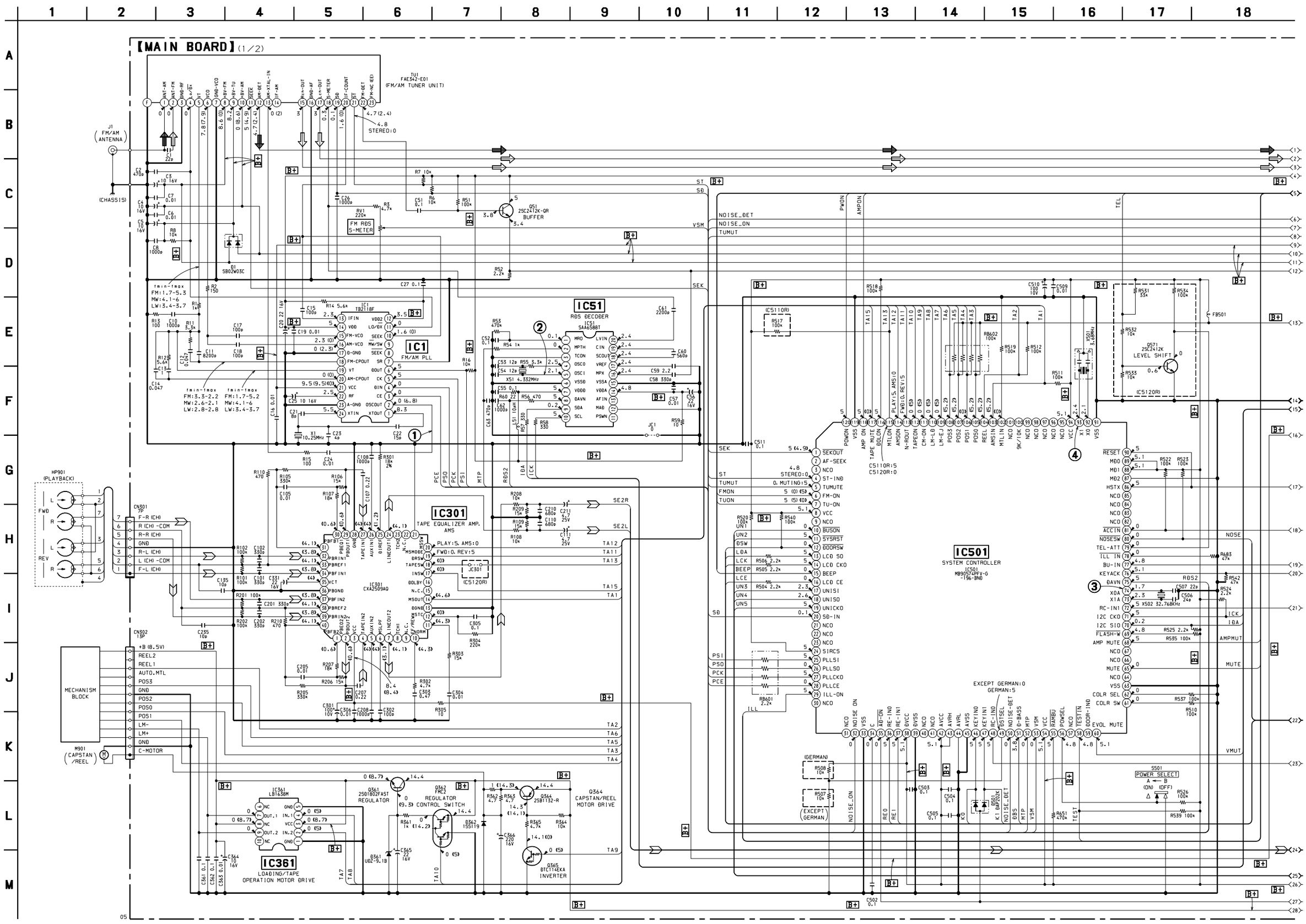
(Page 36)

- **Semiconductor Location**

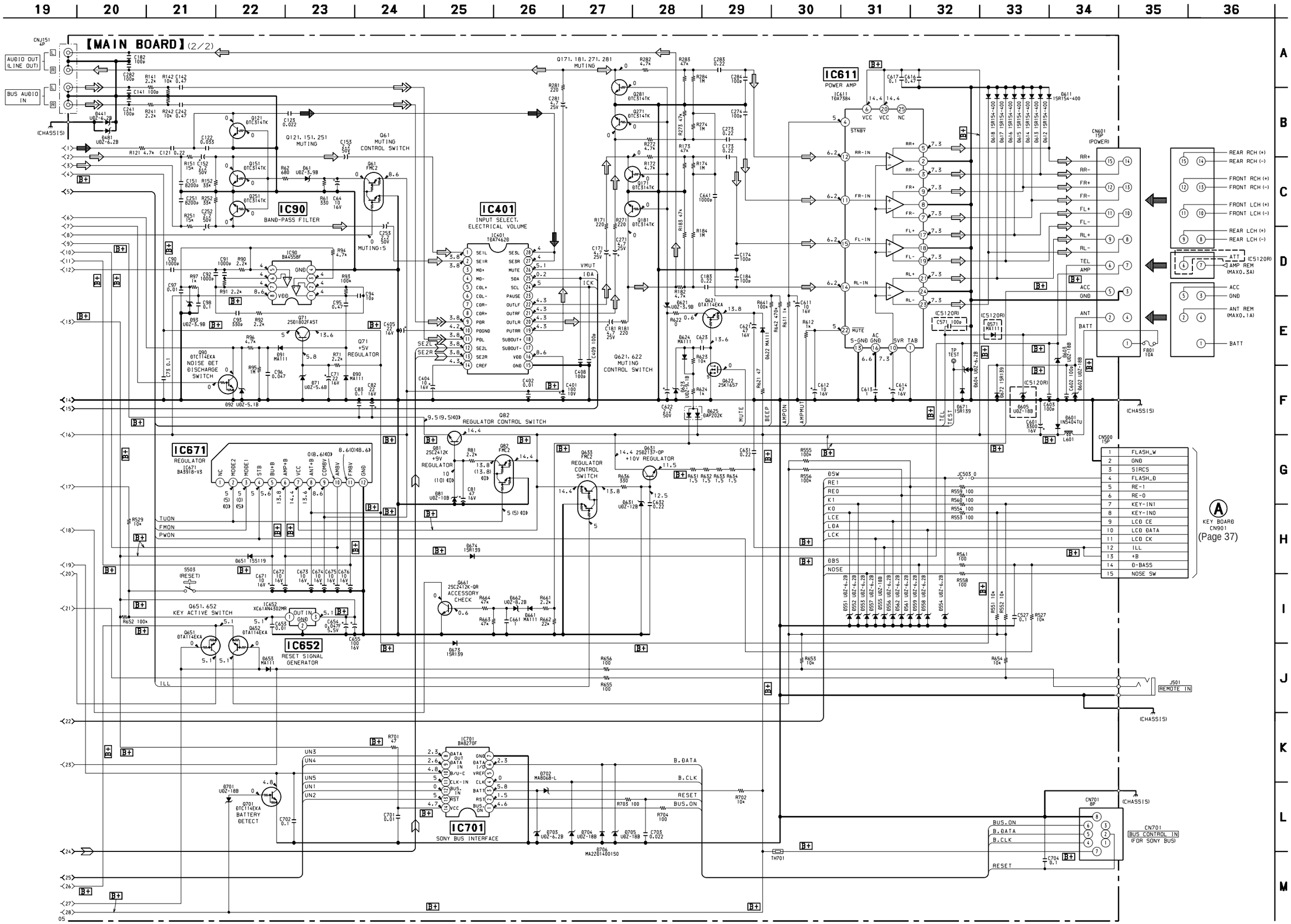
Ref. No.	Location
D362	H-2
D601	C-1
D651	F-2
D671	C-4
D672	E-2
D673	E-2
D674	D-4
IC611	A-9
IC671	E-2
Q631	J-2

6-7. SCHEMATIC DIAGRAM – MAIN Section (1/2) –

• See page 26 for Waveforms. • See page 39 for IC Block Diagrams.



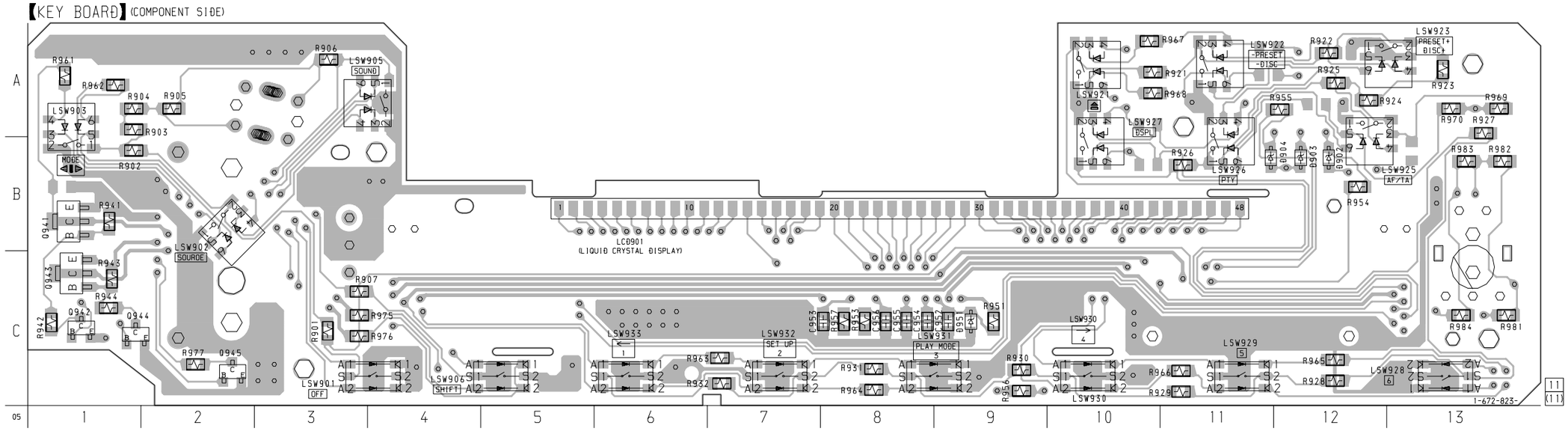
6-8. SCHEMATIC DIAGRAM – MAIN Section (2/2) – • See page 26 for Waveforms. • See page 40 for IC Block Diagrams.



6-9. PRINTED WIRING BOARD – PANEL Section –

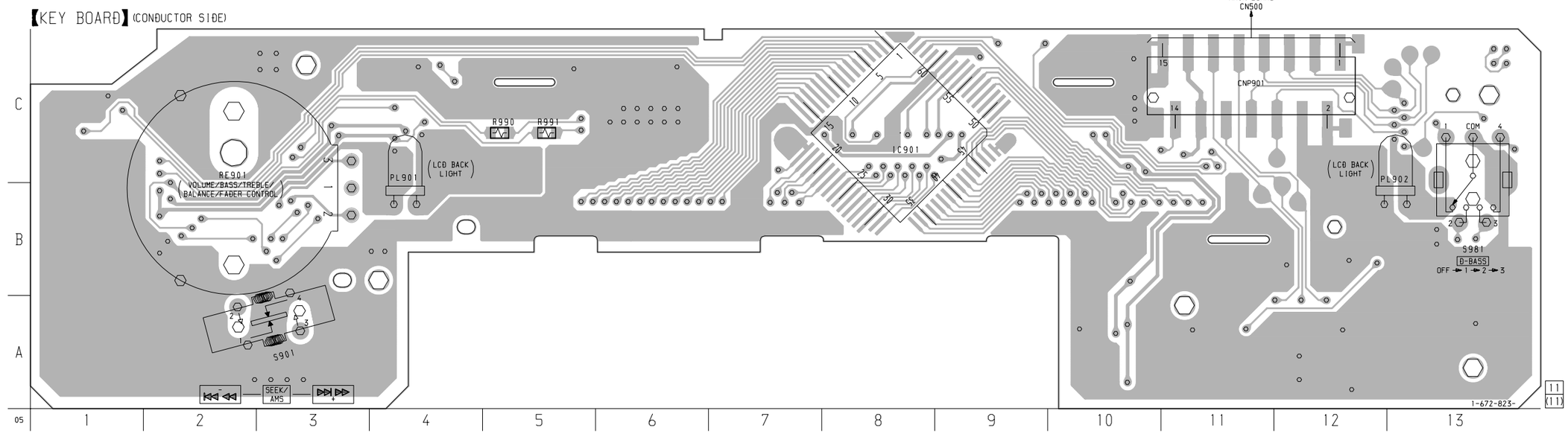
- **Semiconductor Location (Component Side)**

Ref. No.	Location
D902	B-12
D903	B-12
D904	B-11
D951	C-9
Q941	B-1
Q942	C-1
Q943	C-1
Q944	C-1
Q945	C-2

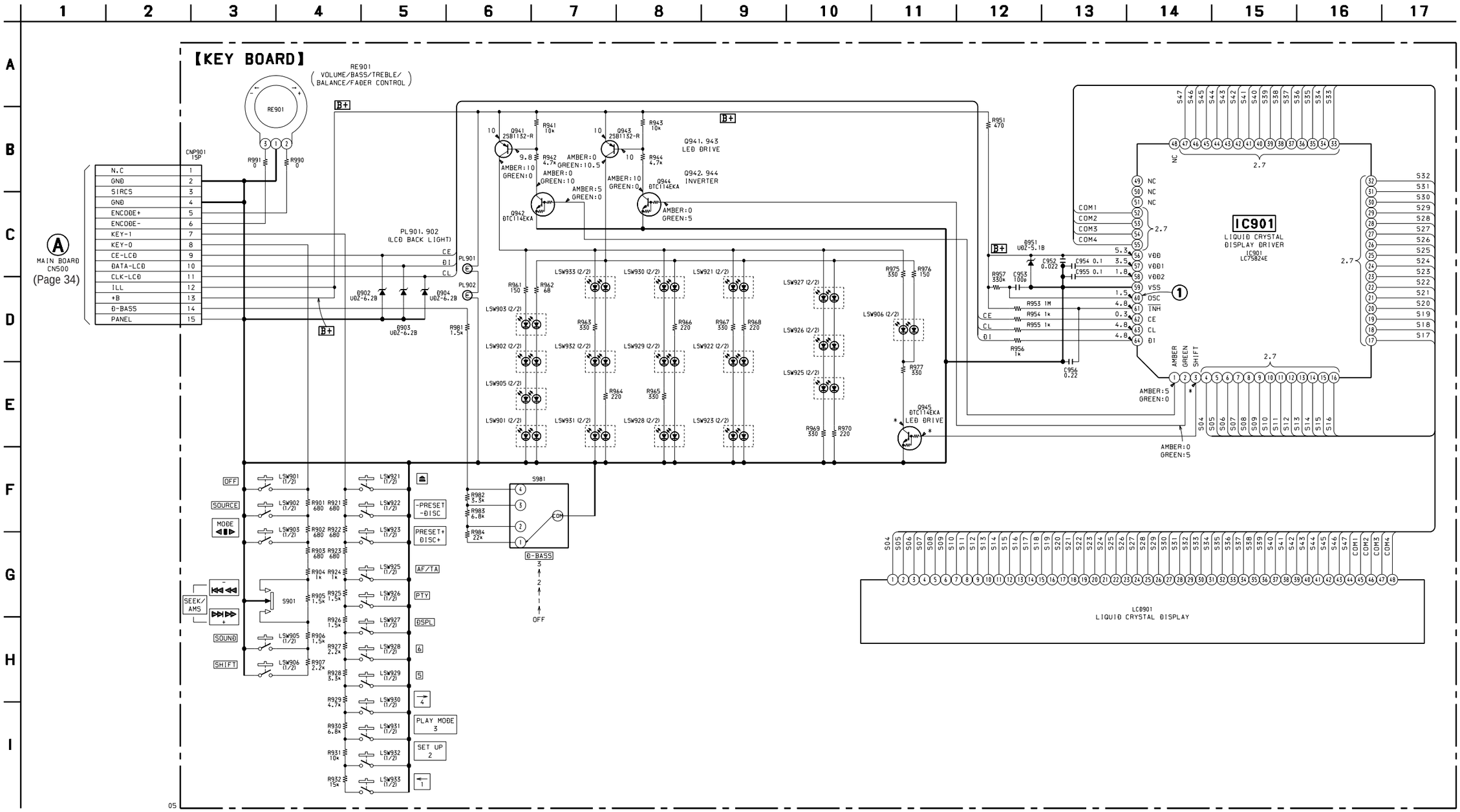


- **Semiconductor Location (Conductor Side)**

Ref. No.	Location
IC901	C-8



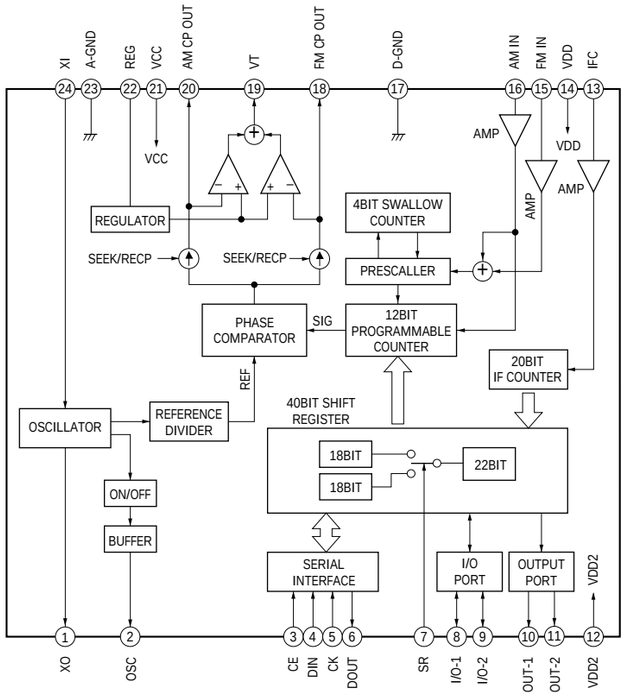
6-10. SCHEMATIC DIAGRAM – PANEL Section – • See page 26 for Waveforms.



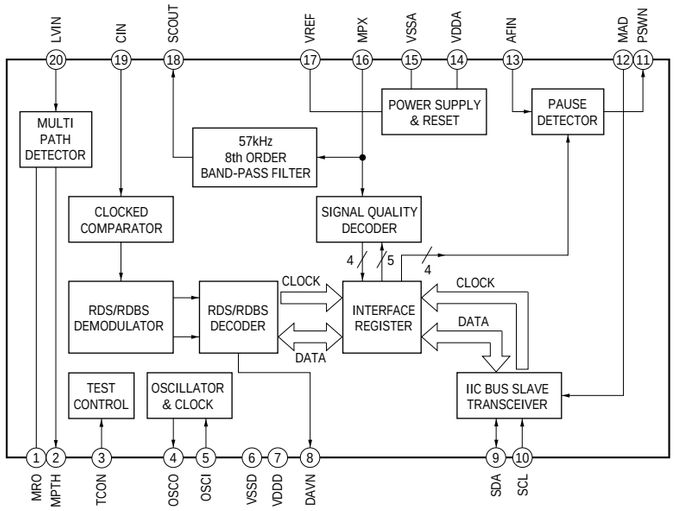
• **IC Block Diagrams**

– MAIN Board –

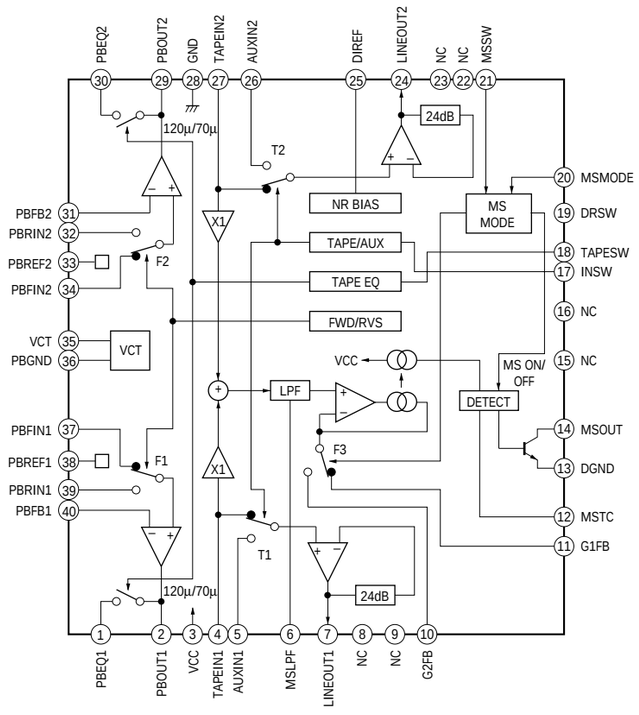
IC1 TB2118F (EL)



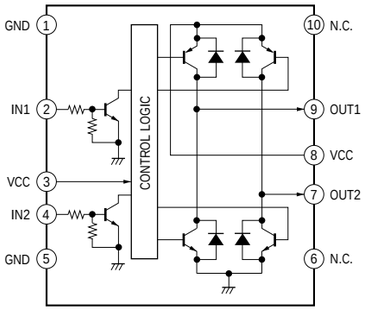
IC51 SAA6588T-118



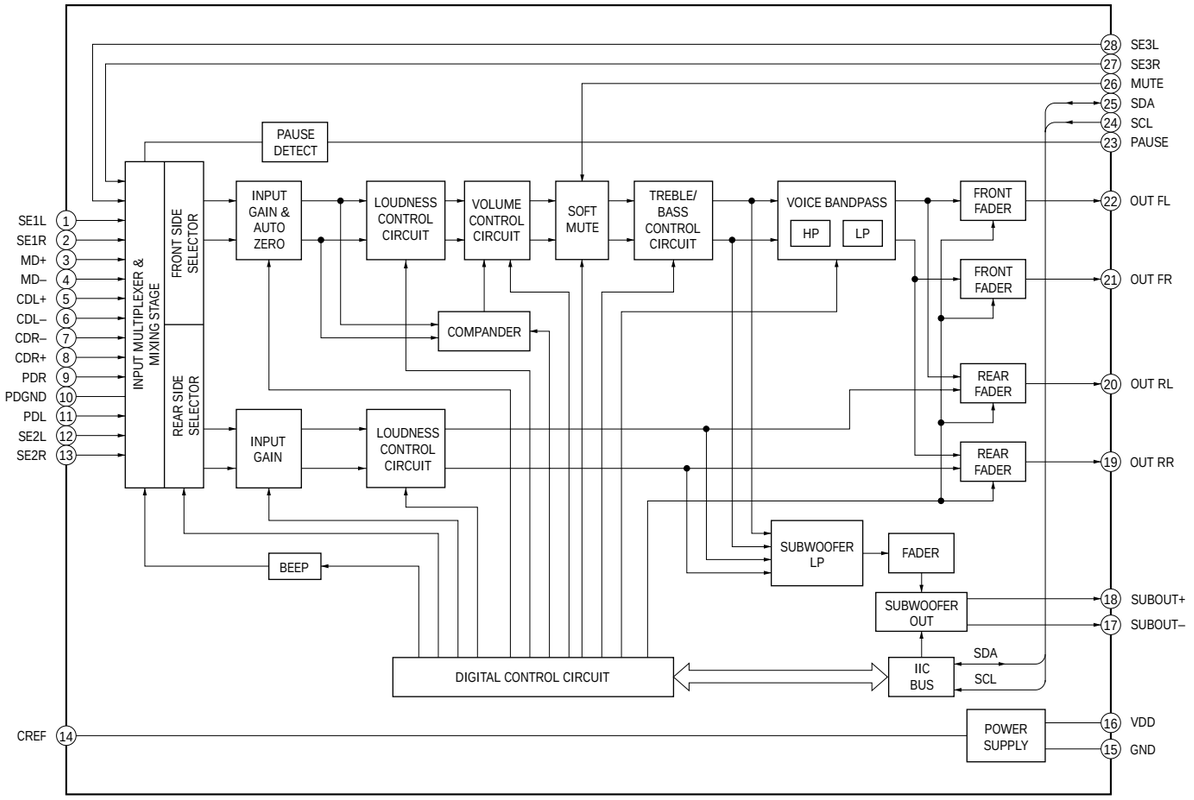
IC301 CXA2509AQ-T4



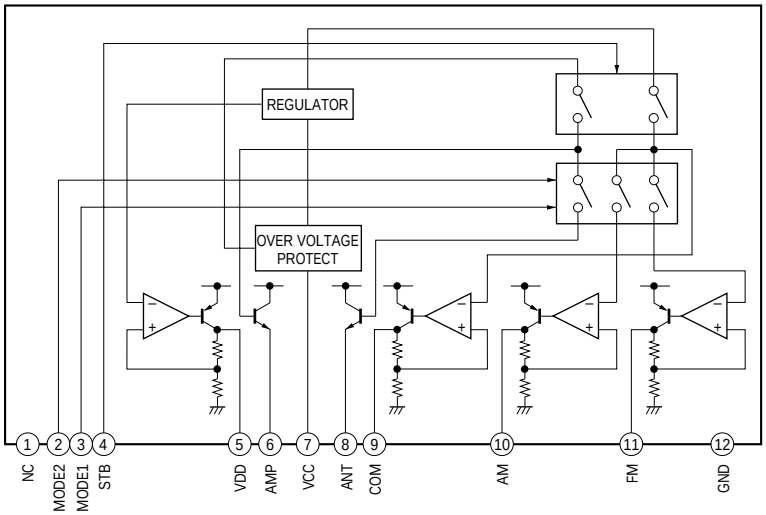
IC361 LB1638M



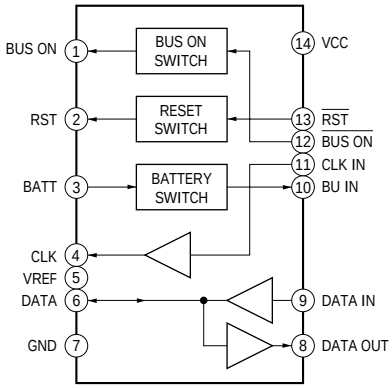
IC401 TDA7462D



IC671 BA3918-V3



IC701 BA8270F-E2



6-11. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC501 MB90574PFV-G-196-BND (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	$\overline{\text{SEEKOUT}}$	O	Seek control signal output to the FM/AM tuner unit (TU1) AM mode: Used for IF count output/SD output request/AGC cut at SEEK or BTM FM mode: Used for SD speed up at SEEK, BTM, or AF "L" is output at tuner off
2	AF-SEEK	O	PLL low-pass filter time constant selection signal output at AF SEEK "H" is output when AF SEEK Not used (open)
3	NCO	O	Not used (open)
4	ST-MONO	I/O	FM stereo broadcasting detection signal input from the FM/AM tuner unit (TU1), or forced monaural control signal output to the FM/AM tuner unit (TU1) "L" is input in the FM stereo mode, or "L" is output in the forced monaural mode
5	TUNMUTE	O	Muting on/off control signal output of the FM and AM tuner signal "H": muting on
6	FM-ON	O	FM system power supply on/off control signal output to the BA3918 (IC671) "L": AM power on, "H": FM power on
7	TU-ON	O	Tuner system power supply on/off control signal output to the BA3918 (IC671) "H": tuner power on
8	VCC	—	Power supply terminal (+5V)
9	NCO	O	Not used (open)
10	$\overline{\text{BUS-ON}}$	O	Bus on/off control signal output to the SONY bus interface (IC701) "L": bus on
11	$\overline{\text{SYSRST}}$	O	Reset signal output to the SONY bus interface (IC701) "L": reset
12	$\overline{\text{DOORSW}}$	I	Front panel open/close detection signal input "L" is input when the front panel is closed
13	LCD SO	O	Serial data output to the liquid crystal display driver (IC901)
14	LCD CKO	O	Serial data transfer clock signal output to the liquid crystal display driver (IC901)
15	BEEP	O	Beep sound drive signal output terminal
16	LCD CE	O	Chip enable signal output to the liquid crystal display driver (IC901) "H" active
17	UNISI	I	Serial data input from the SONY bus interface (IC701)
18	UNISO	O	Serial data output to the SONY bus interface (IC701)
19	UNICKO	O	Serial data transfer clock signal output to the SONY bus interface (IC701)
20	SD-IN	I	Station detector detect input from the FM/AM tuner unit (TU1) Stop level for SEEK, BTM, etc. is determined SD is present at input of "H"
21 to 23	NCO	O	Not used (open)
24	SIRCS	I	Sircs remote control signal input terminal Not used (fixed at "H")
25	PLLSI	I	PLL serial data input from the FM/AM PLL (IC1)
26	PLLSO	O	PLL serial data output to the FM/AM PLL (IC1)
27	PLLCKO	O	PLL serial data transfer clock signal output to the FM/AM PLL (IC1)
28	PLLCE	O	PLL chip enable signal output to the FM/AM PLL (IC1) "H" active
29	ILL-ON	O	Power on/off control signal output of the illumination LED and liquid crystal display driver (IC901) "H": power on Depends on initial setting of power select switch (S501) Power select switch (S501) on: "H" output at the accessory on Power select switch (S501) off: "H" output at the power on
30, 31	NCO	O	Not used (open)
32	NOISE ON	O	Discharge control signal output for the noise detection circuit "H": discharge
33	VSS	—	Ground terminal
34	C	—	Connected to coupling capacitor for the power supply
35	$\overline{\text{AD-ON}}$	O	A/D converter power control signal output terminal When the KEYACK (pin ⑯) that controls reference voltage power for key A/D conversion input is active, "L" is output from this terminal to enable the input
36	RE-IN0	I	Dial pulse input of the rotary encoder (RE900) (for VOLUME/BASS/TREBLE/BALANCE/FADER control)
37	RE-IN1	I	

Pin No.	Pin Name	I/O	Function
38	DVCC	—	Power supply terminal (+5V) (for D/A converter)
39	DVSS	—	Ground terminal (for D/A converter)
40, 41	NCO	O	Not used (open)
42	AVCC	—	Power supply terminal (+5V) (for A/D converter)
43	AVRH	I	Reference voltage (+5V) input terminal (for A/D converter)
44	AVRL	I	Reference voltage (0V) input terminal (for A/D converter)
45	AVSS	—	Ground terminal (for A/D converter)
46	KEYIN0	I	Key input terminal (A/D input) (LSW901 to LSW903, S901, LSW905, LSW906) OFF, SOURCE, MODE ◄II►, SEEK/AMS I◄◄ ◄◄ – ►►I ►► +, SOUND, SHIFT keys input
47	KEYIN1	I	Key input terminal (A/D input) (LSW921 to LSW923, LSW925 to LSW933) ⏏, PRESET DISC –/+, AF/TA, PTY, DSPL, 6, 5, 4 →, 3 PLAY MODE, 2 SET UP, 1 ← keys input
48	RC-IN0	I	Rotary remote commander key input terminal (A/D input)
49	DSTSEL	I	Destination setting terminal (AEP and UK models: fixed at "L", German model: fixed at "H")
50	NOISE DET	I	Noise level detection signal input at SEEK mode (A/D input)
51	D-BASS	I	D-BASS switch (S981) input terminal (A/D input)
52	MTP	I	Multi-path detection signal input from the RDS decoder (IC51)
53	VSM	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (TU1) (A/D input)
54	VCC	—	Power supply terminal (+5V)
55	$\overline{\text{RAMBU}}$	I	Internal RAM reset detection signal input terminal Input terminal to check that RAM data are not destroyed due to low voltage This checking is made within 100 msec after reset Fixed at "H" in this set
56	POWSEL	I	Power select switch (S501) input terminal "L": off (halt mode), "H": on (operation mode)
57	NCO	O	Not used (open)
58	$\overline{\text{TESTIN}}$	I	Setting terminal for the test mode "L": test mode, Normally: fixed at "H"
59	DOOR-IND	O	LED drive signal output of the door indicator "H": LED on "H" is output to turn on LED when front panel is opened Not used (open)
60	EVOL MUTE	O	Muting control signal output to the electrical volume (IC401) Volume minimum: "∞" output ("H" active)
61	COLR SW	I	Setting terminal for the illumination color "L": 2 colors, "H": 1 color (fixed at "L" in this set)
62	COLR SEL	I	Setting terminal for the illumination color "L": amber, "H": green (fixed at "L" in this set)
63	VSS	—	Ground terminal
64	NCO	O	Not used (open)
65	MUTE	O	Audio line muting on/off control signal output terminal "H": muting on
66, 67	NCO	O	Not used (open)
68	AMP MUTE	O	Muting on/off control signal output to the power amplifier (IC611) "L": muting on
69	$\overline{\text{FLASH-W}}$	I	Internal flash memory data write mode detection signal input terminal "L": data write mode Not used (fixed at "H" in this set)
70	I2C SIO	I/O	Two-way data bus with the RDS decoder (IC51) and electrical volume (IC401)
71	I2C CKO	O	Bus clock signal output to the RDS decoder (IC51) and electrical volume (IC401)
72	RC-IN1	I	Rotary remote commander shift key input terminal "L": shift
73	X1A	O	Sub system clock output terminal (32.768 kHz)
74	X0A	I	Sub system clock input terminal (32.768 kHz)
75	DAVN	I	Data transmit completed detect signal input from the RDS decoder (IC51) "H" active
76	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of "H"

Pin No.	Pin Name	I/O	Function
77	BU-IN	I	Battery detect signal input from the SONY bus interface (IC701) and battery detect circuit "L" is input at low voltage
78	$\overline{\text{ILL IN}}$	I	Auto dimmer control illumination line detection signal input terminal "L" is input at dimmer detection Fixed at "L" in this set
79	TEL-ATT	I	Telephone muting signal input terminal At input of "H", the signal is attenuated by –20 dB Used for the XR-C5120R only
80	$\overline{\text{NOSESW}}$	I	Front panel block remove/attach detection signal input terminal "L": front panel is attached
81	$\overline{\text{ACC IN}}$	I	Accessory detect signal input terminal "L": accessory on
82 to 85	NCO	O	Not used (open)
86	HSTX	I	Hardware standby input terminal "L": hardware standby mode Reset signal input in this set
87	MD2	I	Setting terminal for the CPU operational mode (fixed at "L" in this set)
88	MD1	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
89	MD0	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
90	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC652) and reset switch (S503) "L": reset "L" is input for several 100 msec after power on, then it changes to "H"
91	VSS	—	Ground terminal
92	X0	I	Main system clock input terminal (3.68 MHz)
93	X1	O	Main system clock output terminal (3.68 MHz)
94	VCC	—	Power supply terminal (+5V)
95 to 99	NCO	O	Not used (open)
100	9K/10K	I	AM frequency step (9 kHz or 10 kHz) selection signal input terminal "L": 9 kHz, "H": 10 kHz Not used (open)
101	NCO	O	Not used (open)
102	MTLIN	I	Auto metal detection signal input terminal "L": auto metal Fixed at "L" in this set
103	AMSIN	I	Whether a music is present or not from CXA2509AQ (IC301) is detected at auto music sensor "L": music is present, "H": music is not present
104	REEL	I	Rotation detect signal input from supply reel sensor and take-up reel sensor on the deck mechanism
105	POS0	I	Tape position (EJECT/FF/REW/ REV/FWD mode) detect input from the tape operation switch on the deck mechanism POS0: "L": EJECT mode, "H": others mode POS1: "L": FF and FWD mode, "H": others mode POS2: "L": REW mode, "H": others mode POS3: "L": REV and EJECT mode, "H": others mode
106	POS1	I	
107	POS2	I	
108	POS3	I	
109	LM-EJ	O	Motor drive signal output to the loading/tape operation motor drive (IC361) "H" active (For the eject direction and reverse side operation) *1
110	LM-LOD	O	Motor drive signal output to the loading/tape operation motor drive (IC361) "H" active (For the loading direction and forward side operation) *1
111	CM-ON	O	Capstan/reel motor (M901) drive signal output terminal "H": motor on
112	TAPEON	O	Tape system power supply on/off control signal output terminal "H": tape on
113	N-ROUT	O	Forward/reverse direction control signal output to the CXA2509AQ (IC301) "L": forward direction, "H": reverse direction
114	AMSON	O	Tape auto music sensor control signal output to the CXA2509AQ (IC301) "L" is output to lower the gain for audio level at FF/REW mode
115	MTLON	I/O	METAL control in/out terminal At initial mode: auto/manual mode selection input of METAL function (manual at "L" input) At manual mode: METAL on/off control signal output terminal (METAL on at "H" output) At auto mode: input at MTLIN (pin ⑩②) Used for the XR-C5120R only
116	DOLON	I/O	Dolby control in/out terminal At initial mode: valid/invalid selection input of dolby function (valid at "L" input) At normal mode: dolby on/off control signal output terminal (dolby on at "H" output) Not used this function (fixed at "H")

Pin No.	Pin Name	I/O	Function
117	TAPE MUTE	O	Tape muting on/off control signal output to the CXA2509AQ (IC301) "H": muting on Active at ATA, FF/REW mode
118	AMP ON	O	Standby on/off control signal output to the power amplifier (IC611) "L": standby mode, "H": amp on
119	VSS	—	Ground terminal
120	POWON	O	Main system power supply on/off control signal output to the BA3918 (IC671) "H": power on

*1 Loading/tape operation motor control

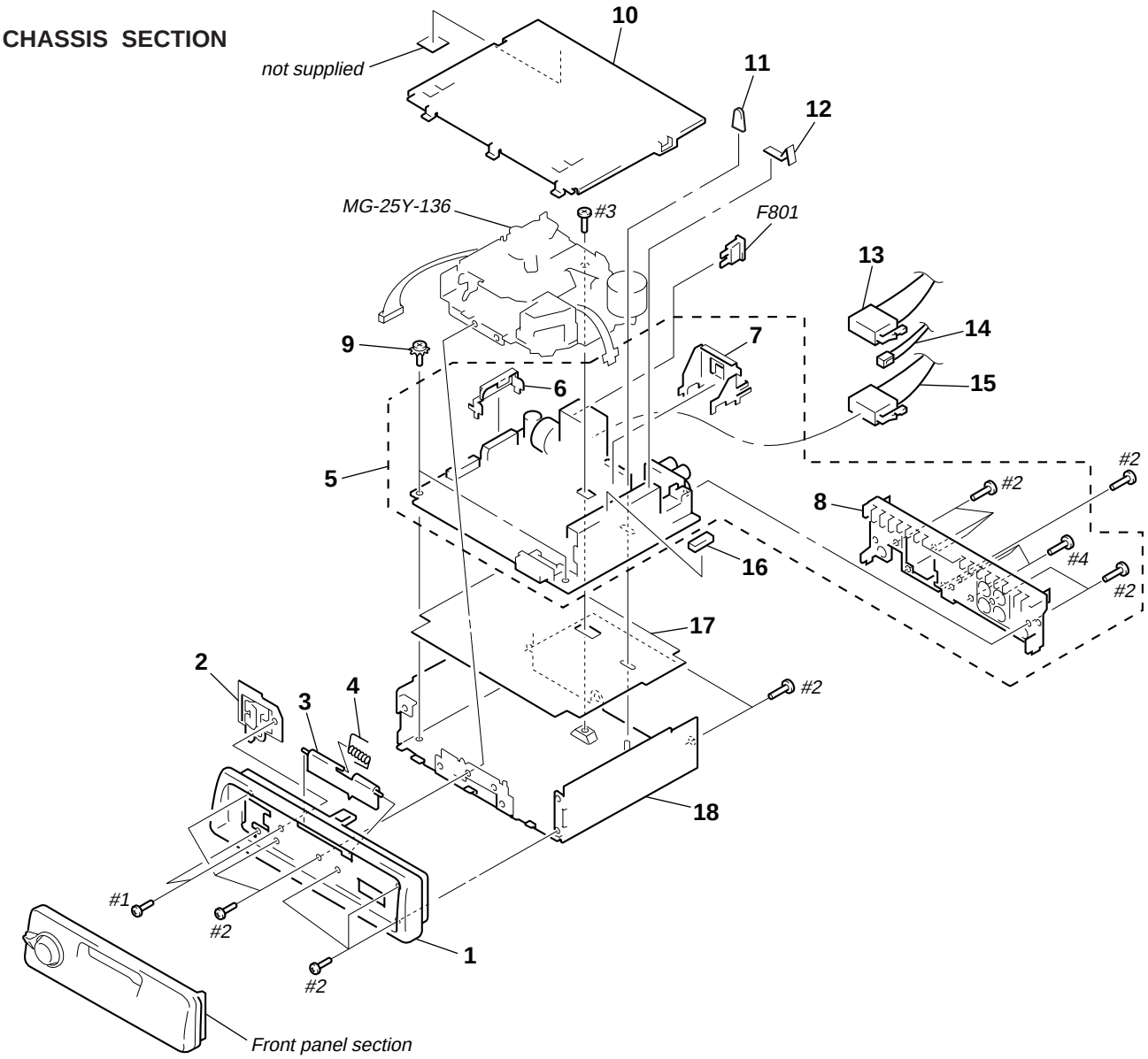
Terminal \ Mode	STOP	LOADING/ FORWARD	EJECT/ REVERSE	BRAKE
LM-LOD (pin ⑩)	"L"	"H"	"L"	"H"
LM-EJ (pin ⑨)	"L"	"L"	"H"	"H"

SECTION 7
EXPLODED VIEWS

NOTE:

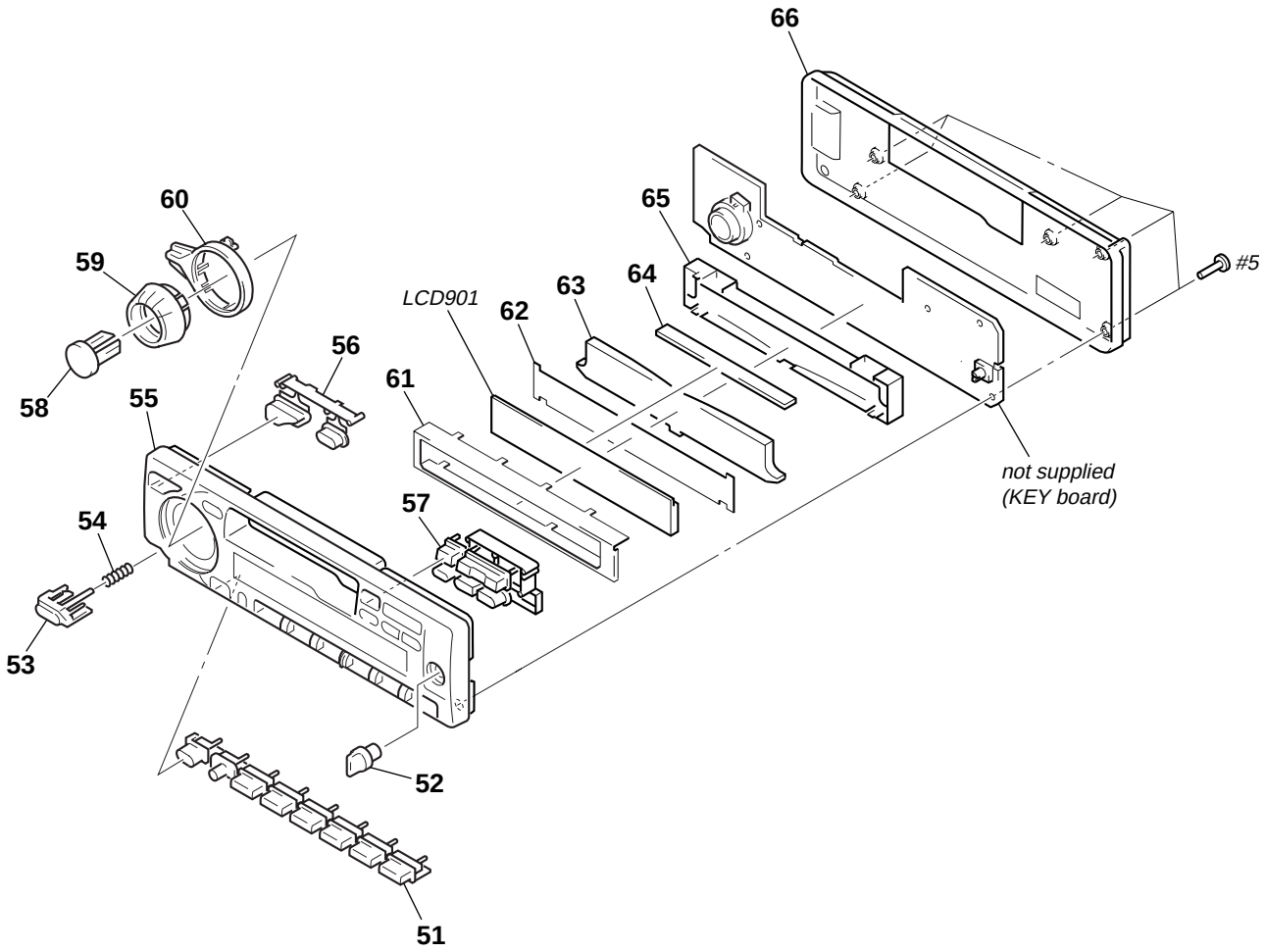
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

(1) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
1	3-030-828-01	PANEL, SUB	
2	X-3367-636-1	LOCK ASSY	
3	3-027-437-41	DOOR, CASSETTE	
4	3-935-003-01	SPRING, TORSION	
* 5	A-3317-345-A	MAIN BOARD, COMPLETE (C5120R: AEP, UK, South European)	
* 5	A-3317-346-A	MAIN BOARD, COMPLETE (C5120R: German)	
* 5	A-3317-351-A	MAIN BOARD, COMPLETE (C5110R: AEP, UK, South European)	
* 5	A-3317-352-A	MAIN BOARD, COMPLETE (C5110R: German)	
* 6	3-031-828-01	BRACKET (REG. IC)	
* 7	3-019-147-01	BRACKET (IC) (M)	
* 8	3-031-050-01	HEAT SINK	
9	3-915-923-01	SCREW, GROUND POINT	
* 10	X-3373-269-1	COVER ASSY (ISO)	
11	3-012-859-01	CAP (25), RUBBER	
12	3-937-650-01	PLATE (C), GROUND	
13	1-782-093-11	CORD (WITH CONNECTOR) (ISO-S) (SPEAKER)	
14	1-777-989-21	CORD (WITH CONNECTOR) (AMP REM) (C5110R)	
14	1-777-989-41	CORD (WITH CONNECTOR) (AMP REM, ATT) (C5120R)	
15	1-782-092-11	CORD (WITH CONNECTOR) (ISO-P) (POWER)	
16	3-935-014-01	CUSHION (U)	
* 17	3-009-306-01	SHEET, INSULATING	
* 18	3-009-813-41	CHASSIS	
F801	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	

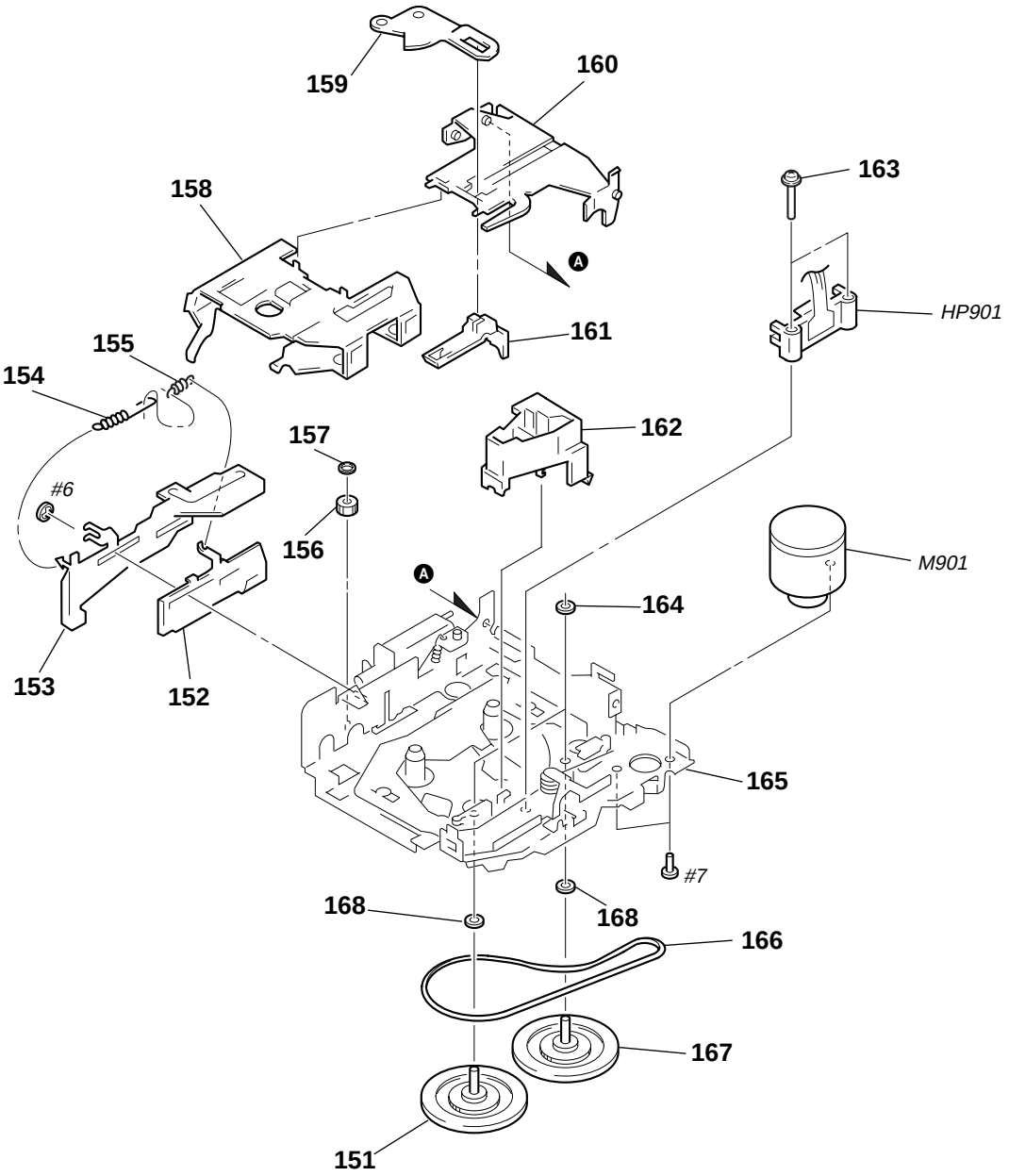
(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-030-835-01	BUTTON (1-6) (OFF. SHIFT. 1. 2. 3. 4. 5. 6)	
52	3-030-837-01	BUTTON (D-BASS) (C5120R)	
52	3-030-837-11	BUTTON (D-BASS) (C5110R)	
53	3-030-838-01	BUTTON (RELEASE) (C5120R)	
53	3-030-838-11	BUTTON (RELEASE) (C5110R)	
54	3-932-475-01	SPRING (RELEASE)	
55	X-3376-780-1	PANEL SUB ASSY (C5110R)	
55	X-3376-783-1	PANEL SUB ASSY (C5120R)	
56	3-030-834-01	BUTTON (M/S) (MODE ◄I►. SOUND)	
57	3-030-836-01	BUTTON (D/P/A) (⏏. - DISC +. DSPL. PTY. AF/TA)	

Ref. No.	Part No.	Description	Remark
58	3-030-831-01	BUTTON (SOURCE)	
59	3-030-830-01	KNOB (VOL)	
60	3-030-832-01	LEVER (S/A) (+. –) (C5120R)	
60	3-030-832-11	LEVER (S/A) (+. –) (C5110R)	
* 61	3-030-840-01	PLATE (B), GROUND	
* 62	3-030-839-01	SHEET (REFLECTOR)	
* 63	3-030-824-01	PLATE, LIGHT GUIDE	
64	1-694-508-11	CONDUCTIVE BOARD, CONNECTION	
* 65	3-030-825-01	HOLDER (LCD)	
66	3-030-827-01	PANEL, FRONT BACK	
LCD901	1-803-322-11	DISPLAY PANEL, LIQUID CRYSTAL	

(3) MECHANISM DECK SECTION (MG-25Y-136)



Ref. No.	Part No.	Description	Remark
151	X-3375-691-1	CLUTCH (FR) ASSY	
* 152	3-019-130-01	LEVER (LDG-A)	
* 153	3-019-131-01	LEVER (LDG-B)	
154	3-020-539-01	SPRING (LD-1), TENSION	
155	3-020-540-01	SPRING (LD-2), TENSION	
156	3-020-542-01	GEAR (LOADING FT)	
157	3-341-753-11	WASHER, POLYETHYLENE	
158	3-020-533-01	HOUSING	
* 159	3-020-532-01	ARM (SUCTION)	
160	3-020-534-01	HANGER	

Ref. No.	Part No.	Description	Remark
161	3-933-346-01	CATCHER	
162	3-933-344-01	GUIDE (C)	
163	3-014-798-01	SCREW (HEAD), SPECIAL	
164	3-364-151-01	WASHER	
165	A-3301-267-A	CHASSIS ASSY (G)	
166	3-017-302-01	BELT (25)	
167	3-936-853-01	FLYWHEEL (F)	
168	3-701-437-21	WASHER	
HP901	1-500-196-21	HEAD, MAGNETIC (PLAYBACK)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	

SECTION 8
ELECTRICAL PARTS LIST

KEY

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
		KEY BOARD	
		**********	
	1-694-508-11	CONDUCTIVE BOARD, CONNECTION	
*	3-030-824-01	PLATE, LIGHT GUIDE	
*	3-030-825-01	HOLDER (LCD)	
*	3-030-839-01	SHEET (REFLECTOR)	
*	3-030-840-01	PLATE (B), GROUND	
		< CAPACITOR >	
C952	1-163-033-00	CERAMIC CHIP 0.022uF	50V
C953	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C954	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C955	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C956	1-164-222-11	CERAMIC CHIP 0.22uF	25V
		< CONNECTOR >	
CNP901	1-785-773-11	PIN, CONNECTOR 15P	
		< DIODE >	
D902	8-719-105-99	DIODE RD6.2M-B1	
D903	8-719-105-99	DIODE RD6.2M-B1	
D904	8-719-105-99	DIODE RD6.2M-B1	
D951	8-719-976-99	DIODE DTZ5.1B	
		< IC >	
IC901	8-759-366-34	IC LC75824E	
		< LIQUID CRYSTAL DISPLAY >	
LCD901	1-803-322-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< SWITCH >	
LSW901	1-771-610-11	SWITCH, TACTILE (WITH LED) (OFF)	
LSW902	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOURCE)	
LSW903	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (MODE, ◄II►)	
LSW905	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOUND)	
LSW906	1-771-610-11	SWITCH, TACTILE (WITH LED) (SHIFT)	
LSW921	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (⏏)	
LSW922	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (– PRESET, – DISC)	
LSW923	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (PRESET +, DISC+)	
LSW925	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (AF/TA)	
LSW926	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (PTY)	
LSW927	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (DSPL)	
LSW928	1-771-610-11	SWITCH, TACTILE (WITH LED) (6)	
LSW929	1-771-610-11	SWITCH, TACTILE (WITH LED) (5)	
LSW930	1-771-610-11	SWITCH, TACTILE (WITH LED) (→, 4)	
LSW931	1-771-610-11	SWITCH, TACTILE (WITH LED) (PLAY MODE, 3)	
LSW932	1-771-610-11	SWITCH, TACTILE (WITH LED) (SET UP, 2)	
LSW933	1-771-610-11	SWITCH, TACTILE (WITH LED) (←, 1)	
		< PILOT LAMP >	
PL901	1-517-633-21	LAMP, PILOT (LCD BACK LIGHT)	
PL902	1-517-633-21	LAMP, PILOT (LCD BACK LIGHT)	
		< TRANSISTOR >	
Q941	8-729-106-60	TRANSISTOR 2SB1115A	
Q942	8-729-900-53	TRANSISTOR DTC114EK	
Q943	8-729-106-60	TRANSISTOR 2SB1115A	
Q944	8-729-900-53	TRANSISTOR DTC114EK	
Q945	8-729-900-53	TRANSISTOR DTC114EK	
		< RESISTOR >	
R901	1-216-647-11	METAL CHIP 680 0.5%	1/10W
R902	1-216-647-11	METAL CHIP 680 0.5%	1/10W
R903	1-216-647-11	METAL CHIP 680 0.5%	1/10W
R904	1-216-651-11	METAL CHIP 1K 0.5%	1/10W
R905	1-216-655-11	METAL CHIP 1.5K 0.5%	1/10W
R906	1-216-655-11	METAL CHIP 1.5K 0.5%	1/10W
R907	1-216-659-11	METAL CHIP 2.2K 0.5%	1/10W
R921	1-216-647-11	METAL CHIP 680 0.5%	1/10W
R922	1-216-647-11	METAL CHIP 680 0.5%	1/10W
R923	1-216-647-11	METAL CHIP 680 0.5%	1/10W
R924	1-216-651-11	METAL CHIP 1K 0.5%	1/10W
R925	1-216-655-11	METAL CHIP 1.5K 0.5%	1/10W
R926	1-216-655-11	METAL CHIP 1.5K 0.5%	1/10W
R927	1-216-659-11	METAL CHIP 2.2K 0.5%	1/10W
R928	1-216-663-11	METAL CHIP 3.3K 0.5%	1/10W
R929	1-216-667-11	METAL CHIP 4.7K 0.5%	1/10W
R930	1-216-671-11	METAL CHIP 6.8K 0.5%	1/10W
R931	1-208-806-11	RES,CHIP 10K 2%	1/10W
R932	1-208-810-11	RES,CHIP 15K 2%	1/10W
R941	1-216-073-00	METAL CHIP 10K 5%	1/10W
R942	1-216-065-00	RES,CHIP 4.7K 5%	1/10W
R943	1-216-073-00	METAL CHIP 10K 5%	1/10W
R944	1-216-065-00	RES,CHIP 4.7K 5%	1/10W

KEY MAIN

Ref. No.	Part No.	Description			Remark
R951	1-216-041-00	METAL CHIP	470	5%	1/10W
R953	1-216-121-00	RES,CHIP	1M	5%	1/10W
R954	1-216-049-11	RES,CHIP	1K	5%	1/10W
R955	1-216-049-11	RES,CHIP	1K	5%	1/10W
R956	1-216-049-11	RES,CHIP	1K	5%	1/10W
R957	1-216-109-00	METAL CHIP	330K	5%	1/10W
R961	1-216-029-00	METAL CHIP	150	5%	1/10W
R962	1-216-021-00	METAL CHIP	68	5%	1/10W
R963	1-216-037-00	METAL CHIP	330	5%	1/10W
R964	1-216-033-00	METAL CHIP	220	5%	1/10W
R965	1-216-037-00	METAL CHIP	330	5%	1/10W
R966	1-216-033-00	METAL CHIP	220	5%	1/10W
R967	1-216-037-00	METAL CHIP	330	5%	1/10W
R968	1-216-033-00	METAL CHIP	220	5%	1/10W
R969	1-216-037-00	METAL CHIP	330	5%	1/10W
R970	1-216-033-00	METAL CHIP	220	5%	1/10W
R975	1-216-037-00	METAL CHIP	330	5%	1/10W
R976	1-216-029-00	METAL CHIP	150	5%	1/10W
R977	1-216-037-00	METAL CHIP	330	5%	1/10W
R981	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R982	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R983	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R984	1-216-081-00	METAL CHIP	22K	5%	1/10W
R990	1-216-295-00	SHORT	0		
R991	1-216-295-00	SHORT	0		
		< ROTARY ENCODER >			
RE901	1-475-014-11	ENCODER, ROTARY (VOLUME/BASS/ TREBLE/BALANCE/FADER CONTROL)			
		< SWITCH >			
S901	1-771-290-11	SWITCH, SLIDE (▶▶I ▶▶ +, – ◀◀ I◀◀ : SEEK/AMS)			
S981	1-762-937-11	SWITCH, ROTARY (D-BASS)			
**********					
*	A-3317-345-A	MAIN BOARD, COMPLETE (XR-C5120R: AEP, UK, South European)			
*	A-3317-346-A	MAIN BOARD, COMPLETE (XR-C5120R: German)			
*	A-3317-351-A	MAIN BOARD, COMPLETE (XR-C5110R: AEP, UK, South European)			
*	A-3317-352-A	MAIN BOARD, COMPLETE (XR-C5110R: German)			
		**********			
*	3-019-147-01	BRACKET (IC) (M)			
*	3-031-050-01	HEAT SINK			
*	3-031-828-01	BRACKET (REG.IC)			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-795-09	SCREW +PTT 2.6X12 (S)			
		< CAPACITOR >			
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C3	1-124-233-11	ELECT	10uF	20%	16V
C4	1-124-233-11	ELECT	10uF	20%	16V
C5	1-124-233-11	ELECT	10uF	20%	16V
C6	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C7	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V

Ref. No.	Part No.	Description			Remark
C8	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C10	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C12	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C13	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C14	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C15	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C16	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C17	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C18	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C19	1-163-059-91	CERAMIC CHIP	0.01uF	10%	50V
C20	1-124-234-00	ELECT	22uF	20%	16V
C21	1-163-091-00	CERAMIC CHIP	8PF		50V
C22	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C23	1-163-087-00	CERAMIC CHIP	4PF		50V
C24	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C25	1-124-233-11	ELECT	10uF	20%	16V
C26	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C27	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C51	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C52	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C53	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C54	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C55	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C56	1-124-234-00	ELECT	22uF	20%	16V
C57	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C58	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C59	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C60	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C61	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C62	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C63	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C64	1-124-233-11	ELECT	10uF	20%	16V
C71	1-124-234-00	ELECT	22uF	20%	16V
C73	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C81	1-124-589-11	ELECT	47uF	20%	16V
C82	1-124-234-00	ELECT	22uF	20%	16V
C83	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C90	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C91	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C92	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C93	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C94	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C95	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C96	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C97	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C98	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C101	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C102	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C105	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C107	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C108	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C110	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C111	1-126-163-11	ELECT	4.7uF	20%	50V
C121	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C122	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C123	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C135	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V

Ref. No.	Part No.	Description			Remark
C141	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C142	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C151	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C152	1-124-257-00	ELECT	2.2uF	20%	50V
C153	1-124-257-00	ELECT	2.2uF	20%	50V
C171	1-126-163-11	ELECT	4.7uF	20%	50V
C173	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C174	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C181	1-126-163-11	ELECT	4.7uF	20%	50V
C182	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C183	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C184	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C201	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C202	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C205	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C207	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C208	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C210	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C211	1-126-163-11	ELECT	4.7uF	20%	50V
C235	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C241	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C242	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C251	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C252	1-124-257-00	ELECT	2.2uF	20%	50V
C253	1-124-257-00	ELECT	2.2uF	20%	50V
C271	1-126-163-11	ELECT	4.7uF	20%	50V
C273	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C274	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C281	1-126-163-11	ELECT	4.7uF	20%	50V
C282	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C283	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C284	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C301	1-124-584-00	ELECT	100uF	20%	10V
C302	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C303	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C304	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C305	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C306	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C331	1-124-234-00	ELECT	22uF	20%	16V
C361	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C362	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C363	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C364	1-126-157-11	ELECT	10uF	20%	16V
C365	1-124-234-00	ELECT	22uF	20%	16V
C366	1-126-934-11	ELECT	220uF	20%	16V
C401	1-124-584-00	ELECT	100uF	20%	10V
C402	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C404	1-124-233-11	ELECT	10uF	20%	16V
C405	1-124-234-00	ELECT	22uF	20%	16V
C408	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C409	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C502	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C503	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C504	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C505	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C506	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C507	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C509	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C510	1-124-584-00	ELECT	100uF	20%	10V
C511	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C527	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C571	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C5120R)
C601	1-107-885-31	ELECT	3300uF	20%	16V
C602	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C603	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C611	1-124-233-11	ELECT	10uF	20%	16V
C612	1-124-233-11	ELECT	10uF	20%	16V
C613	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C614	1-107-909-11	ELECT	47uF	20%	16V
C616	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C617	1-136-165-00	FILM	0.1uF	5%	50V
C621	1-124-589-11	ELECT	47uF	20%	16V
C622	1-124-257-00	ELECT	2.2uF	20%	50V
C623	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C631	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C632	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C641	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C653	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C654	1-125-701-11	DOUBLE LAYER	0.047F	0	5.5V
C655	1-126-933-11	ELECT	100uF	20%	16V
C661	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C671	1-126-157-11	ELECT	10uF	20%	16V
C672	1-126-157-11	ELECT	10uF	20%	16V
C673	1-126-157-11	ELECT	10uF	20%	16V
C674	1-126-157-11	ELECT	10uF	20%	16V
C675	1-126-157-11	ELECT	10uF	20%	16V
C676	1-126-157-11	ELECT	10uF	20%	16V
C701	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C702	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C703	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C704	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V

< CONNECTOR >

CN301	1-766-260-11	CONNECTOR, FFC/FPC (ZIF) 7P	
* CN302	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P	
CN500	1-785-772-11	PLUG, CONNECTOR 15P	
CN601	1-785-761-21	PIN, CONNECTOR (ISO)	
CN701	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)	

< JACK >

CNJ151	1-774-699-12	JACK, PIN 4P (BUS AUDIO IN, AUDUO OUT)

< DIODE >

D1	8-719-991-65	DIODE SB02W03C
D61	8-719-422-12	DIODE MA8039
D71	8-719-158-15	DIODE RD5.6S-B
D81	8-719-977-28	DIODE DTZ10B
D90	8-719-404-50	DIODE MA111-TX
D91	8-719-404-50	DIODE MA111-TX
D92	8-719-976-99	DIODE DTZ5.1B
D93	8-719-422-12	DIODE MA8039
D361	8-719-977-22	DIODE DTZ9.1
D362	8-719-911-19	DIODE 1SS119

MAIN

Ref. No.	Part No.	Description	Remark
D441	8-719-105-99	DIODE RD6.2M-B1	
D481	8-719-105-99	DIODE RD6.2M-B1	
D501	8-719-914-44	DIODE DAP202K	
D551	8-719-105-99	DIODE RD6.2M-B1	
D552	8-719-105-99	DIODE RD6.2M-B1	
D553	8-719-105-99	DIODE RD6.2M-B1	
D554	8-719-105-99	DIODE RD6.2M-B1	
D555	8-719-056-93	DIODE UDZ-TE-17-18B	
D556	8-719-105-99	DIODE RD6.2M-B1	
D557	8-719-105-99	DIODE RD6.2M-B1	
D558	8-719-105-99	DIODE RD6.2M-B1	
D559	8-719-105-99	DIODE RD6.2M-B1	
D561	8-719-105-99	DIODE RD6.2M-B1	
D562	8-719-105-99	DIODE RD6.2M-B1	
D571	8-719-404-50	DIODE MA111-TX (C5120R)	
D601	8-719-049-38	DIODE 1N5404TU	
D602	8-719-056-93	DIODE UDZ-TE-17-18B	
D603	8-719-056-93	DIODE UDZ-TE-17-18B	
D604	8-719-105-99	DIODE RD6.2M-B1	
D605	8-719-056-93	DIODE UDZ-TE-17-18B (C5120R)	
D611	8-719-053-18	DIODE 1SR154-400TE-25	
D612	8-719-053-18	DIODE 1SR154-400TE-25	
D613	8-719-053-18	DIODE 1SR154-400TE-25	
D614	8-719-053-18	DIODE 1SR154-400TE-25	
D615	8-719-053-18	DIODE 1SR154-400TE-25	
D616	8-719-053-18	DIODE 1SR154-400TE-25	
D617	8-719-053-18	DIODE 1SR154-400TE-25	
D618	8-719-053-18	DIODE 1SR154-400TE-25	
D621	8-719-422-12	DIODE MA8039	
D622	8-719-404-50	DIODE MA111-TX	
D623	8-719-977-22	DIODE DTZ9.1	
D624	8-719-404-50	DIODE MA111-TX	
D625	8-719-914-44	DIODE DAP202K	
D631	8-719-158-49	DIODE RD12SB2	
D651	8-719-911-19	DIODE 1SS119	
D653	8-719-404-50	DIODE MA111-TX	
D661	8-719-404-50	DIODE MA111-TX	
D662	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D671	8-719-970-02	DIODE 1SR139-400	
D672	8-719-970-02	DIODE 1SR139-400	
D673	8-719-970-02	DIODE 1SR139-400	
D674	8-719-970-02	DIODE 1SR139-400	
D701	8-719-056-93	DIODE UDZ-TE-17-18B	
D702	8-719-017-62	DIODE MA8068-L-TX	
D703	8-719-105-99	DIODE RD6.2M-B1	
D704	8-719-056-93	DIODE UDZ-TE-17-18B	
D705	8-719-056-93	DIODE UDZ-TE-17-18B	
D706	8-719-072-70	DIODE MA2ZD14001S0	
		< COIL >	
FB501	1-414-233-22	INDUCTOR CHIP 0uH	
		< IC >	
IC1	8-759-573-79	IC TB2118F(EL)	
IC51	8-759-492-59	IC SAA6588T-118	
IC90	8-759-909-71	IC BA4558F	
IC301	8-752-079-78	IC CXA2509AQ-T4	
IC361	8-759-823-87	IC LB1638M	

Ref. No.	Part No.	Description	Remark
IC401	8-759-572-10	IC TDA7462D	
IC501	8-759-585-83	IC MB90574PFV-G-196-BND	
IC611	8-759-490-74	IC TDA7384	
IC652	8-759-574-61	IC XC61AN4302MR	
IC671	8-759-347-50	IC BA3918-V3	
IC701	8-759-449-89	IC BA8270F-E2	
		< JACK >	
J1	1-764-808-21	JACK (FM/AM ANTENNA)	
J501	1-566-822-41	JACK (REMOTE IN)	
		< SHORT >	
JC1	1-216-295-00	SHORT 0	
JC301	1-216-295-91	SHORT 0 (C5120R)	
JC503	1-216-295-00	SHORT 0	
		< COIL >	
L51	1-410-509-11	INDUCTOR 10uH	
L601	1-411-669-21	COIL, CHOKE	
		< TRANSISTOR >	
Q51	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q61	8-729-921-25	TRANSISTOR FMC2	
Q71	8-729-015-11	TRANSISTOR 2SD1802FAST-TL	
Q81	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q82	8-729-921-25	TRANSISTOR FMC2	
Q90	8-729-900-53	TRANSISTOR DTC114EK	
Q121	8-729-920-21	TRANSISTOR DTC314TKH04	
Q151	8-729-920-21	TRANSISTOR DTC314TKH04	
Q171	8-729-920-21	TRANSISTOR DTC314TKH04	
Q181	8-729-920-21	TRANSISTOR DTC314TKH04	
Q251	8-729-920-21	TRANSISTOR DTC314TKH04	
Q271	8-729-920-21	TRANSISTOR DTC314TKH04	
Q281	8-729-920-21	TRANSISTOR DTC314TKH04	
Q361	8-729-015-11	TRANSISTOR 2SD1802FAST-TL	
Q362	8-729-921-25	TRANSISTOR FMC2	
Q364	8-729-106-60	TRANSISTOR 2SB1115A	
Q365	8-729-900-53	TRANSISTOR DTC114EK	
Q571	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (C5120R)	
Q621	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q622	8-729-021-94	FET 2SK1657-T1B	
Q631	8-729-423-99	TRANSISTOR 2SD2137-OP	
Q633	8-729-921-25	TRANSISTOR FMC2	
Q651	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q652	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q661	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q701	8-729-900-53	TRANSISTOR DTC114EK	
		< RESISTOR >	
R1	1-216-049-11	RES,CHIP 1K 5% 1/10W	
R2	1-216-029-00	METAL CHIP 150 5% 1/10W	
R3	1-216-065-00	RES,CHIP 4.7K 5% 1/10W	
R6	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R7	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R8	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R11	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	

Ref. No.	Part No.	Description			Remark
R12	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R13	1-216-025-00	RES,CHIP	100	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R15	1-216-025-00	RES,CHIP	100	5%	1/10W
R16	1-216-073-00	METAL CHIP	10K	5%	1/10W
R51	1-216-097-00	RES,CHIP	100K	5%	1/10W
R52	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R53	1-216-113-00	METAL CHIP	470K	5%	1/10W
R54	1-216-049-11	RES,CHIP	1K	5%	1/10W
R55	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R56	1-216-041-00	METAL CHIP	470	5%	1/10W
R57	1-216-037-00	METAL CHIP	330	5%	1/10W
R58	1-216-037-00	METAL CHIP	330	5%	1/10W
R59	1-216-001-00	METAL CHIP	10	5%	1/10W
R60	1-216-009-00	RES,CHIP	22	5%	1/10W
R61	1-216-037-00	METAL CHIP	330	5%	1/10W
R62	1-216-045-00	METAL CHIP	680	5%	1/10W
R71	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R81	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R90	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R91	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R92	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R93	1-216-097-00	RES,CHIP	100K	5%	1/10W
R94	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R95	1-216-121-00	RES,CHIP	1M	5%	1/10W
R96	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R97	1-216-049-11	RES,CHIP	1K	5%	1/10W
R101	1-216-097-00	RES,CHIP	100K	5%	1/10W
R102	1-216-097-00	RES,CHIP	100K	5%	1/10W
R105	1-216-109-00	METAL CHIP	330K	5%	1/10W
R106	1-216-077-00	METAL CHIP	15K	5%	1/10W
R107	1-216-079-00	METAL CHIP	18K	5%	1/10W
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W
R109	1-216-077-00	METAL CHIP	15K	5%	1/10W
R110	1-216-041-00	METAL CHIP	470	5%	1/10W
R121	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R141	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R142	1-216-073-00	METAL CHIP	10K	5%	1/10W
R151	1-216-077-00	METAL CHIP	15K	5%	1/10W
R152	1-216-085-00	METAL CHIP	33K	5%	1/10W
R171	1-216-033-00	METAL CHIP	220	5%	1/10W
R172	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R173	1-216-089-00	RES,CHIP	47K	5%	1/10W
R174	1-216-121-00	RES,CHIP	1M	5%	1/10W
R181	1-216-033-00	METAL CHIP	220	5%	1/10W
R182	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R183	1-216-089-00	RES,CHIP	47K	5%	1/10W
R184	1-216-121-00	RES,CHIP	1M	5%	1/10W
R201	1-216-097-00	RES,CHIP	100K	5%	1/10W
R202	1-216-097-00	RES,CHIP	100K	5%	1/10W
R205	1-216-109-00	METAL CHIP	330K	5%	1/10W
R206	1-216-077-00	METAL CHIP	15K	5%	1/10W
R207	1-216-079-00	METAL CHIP	18K	5%	1/10W
R208	1-216-073-00	METAL CHIP	10K	5%	1/10W
R209	1-216-077-00	METAL CHIP	15K	5%	1/10W
R210	1-216-041-00	METAL CHIP	470	5%	1/10W
R241	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R242	1-216-073-00	METAL CHIP	10K	5%	1/10W

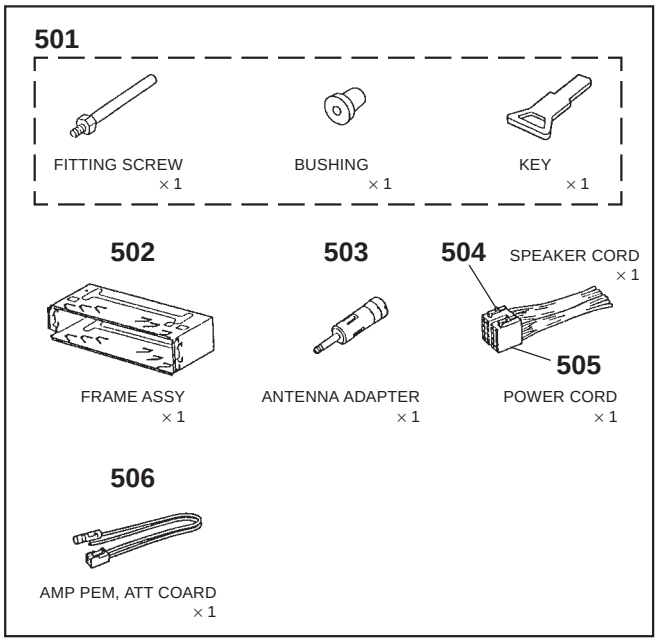
Ref. No.	Part No.	Description			Remark
R251	1-216-077-00	METAL CHIP	15K	5%	1/10W
R252	1-216-085-00	METAL CHIP	33K	5%	1/10W
R271	1-216-033-00	METAL CHIP	220	5%	1/10W
R272	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R273	1-216-089-00	RES,CHIP	47K	5%	1/10W
R274	1-216-121-00	RES,CHIP	1M	5%	1/10W
R281	1-216-033-00	METAL CHIP	220	5%	1/10W
R282	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R283	1-216-089-00	RES,CHIP	47K	5%	1/10W
R284	1-216-121-00	RES,CHIP	1M	5%	1/10W
R301	1-208-812-11	RES,CHIP	18K	2%	1/10W
R302	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R303	1-216-077-00	METAL CHIP	15K	5%	1/10W
R304	1-216-105-00	RES,CHIP	220K	5%	1/10W
R305	1-216-001-00	METAL CHIP	10	5%	1/10W
R361	1-216-049-11	RES,CHIP	1K	5%	1/10W
R362	1-249-389-11	CARBON	4.7	5%	1/4W
R363	1-249-389-11	CARBON	4.7	5%	1/4W
R364	1-216-073-00	METAL CHIP	10K	5%	1/10W
R365	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R504	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R505	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R506	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W (AEP, UK, South European)
R508	1-216-073-00	METAL CHIP	10K	5%	1/10W (German)
R510	1-216-097-00	RES,CHIP	100K	5%	1/10W
R511	1-216-097-00	RES,CHIP	100K	5%	1/10W
R512	1-216-097-00	RES,CHIP	100K	5%	1/10W
R517	1-216-097-00	RES,CHIP	100K	5%	1/10W (C5110R)
R518	1-216-097-00	RES,CHIP	100K	5%	1/10W
R519	1-216-097-00	RES,CHIP	100K	5%	1/10W
R520	1-216-097-00	RES,CHIP	100K	5%	1/10W
R522	1-216-097-00	RES,CHIP	100K	5%	1/10W
R523	1-216-097-00	RES,CHIP	100K	5%	1/10W
R524	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R525	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R526	1-216-097-00	RES,CHIP	100K	5%	1/10W
R527	1-208-806-11	RES,CHIP	10K	0.5%	1/10W
R529	1-216-073-00	METAL CHIP	10K	5%	1/10W
R531	1-216-085-00	METAL CHIP	33K	5%	1/10W (C5120R)
R532	1-216-073-00	METAL CHIP	10K	5%	1/10W (C5120R)
R533	1-216-073-00	METAL CHIP	10K	5%	1/10W (C5120R)
R534	1-216-097-00	RES,CHIP	100K	5%	1/10W (C5120R)
R535	1-216-097-00	RES,CHIP	100K	5%	1/10W
R537	1-216-097-00	RES,CHIP	100K	5%	1/10W
R539	1-216-097-00	RES,CHIP	100K	5%	1/10W
R540	1-216-097-00	RES,CHIP	100K	5%	1/10W
R542	1-216-089-00	RES,CHIP	47K	5%	1/10W
R551	1-208-806-11	RES,CHIP	10K	0.5%	1/10W
R552	1-208-806-11	RES,CHIP	10K	0.5%	1/10W
R553	1-216-025-00	RES,CHIP	100	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R554	1-216-025-00	RES,CHIP	100	5%	1/10W
R555	1-216-097-00	RES,CHIP	100K	5%	1/10W
R556	1-216-097-00	RES,CHIP	100K	5%	1/10W
R558	1-216-025-00	RES,CHIP	100	5%	1/10W
R559	1-216-025-00	RES,CHIP	100	5%	1/10W
R560	1-216-025-00	RES,CHIP	100	5%	1/10W
R561	1-216-025-00	RES,CHIP	100	5%	1/10W
R611	1-216-049-11	RES,CHIP	1K	5%	1/10W
R612	1-216-049-11	RES,CHIP	1K	5%	1/10W
R621	1-216-017-00	RES,CHIP	47	5%	1/10W
R622	1-216-295-00	SHORT	0		
R623	1-216-073-00	METAL CHIP	10K	5%	1/10W
R624	1-216-049-11	RES,CHIP	1K	5%	1/10W
R631	1-249-383-11	CARBON	1.5	5%	1/6W
R632	1-249-383-11	CARBON	1.5	5%	1/6W
R633	1-249-383-11	CARBON	1.5	5%	1/6W
R634	1-249-383-11	CARBON	1.5	5%	1/6W
R636	1-216-037-00	METAL CHIP	330	5%	1/10W
R641	1-216-097-00	RES,CHIP	100K	5%	1/10W
R642	1-216-113-00	METAL CHIP	470K	5%	1/10W
R651	1-216-113-00	METAL CHIP	470K	5%	1/10W
R652	1-216-097-00	RES,CHIP	100K	5%	1/10W
R653	1-208-806-11	RES,CHIP	10K	0.5%	1/10W
R654	1-216-073-00	METAL CHIP	10K	5%	1/10W
R655	1-216-025-00	RES,CHIP	100	5%	1/10W
R656	1-216-025-00	RES,CHIP	100	5%	1/10W
R661	1-249-421-11	CARBON	2.2K	5%	1/4W
R662	1-216-081-00	METAL CHIP	22K	5%	1/10W
R663	1-216-089-00	RES,CHIP	47K	5%	1/10W
R664	1-216-089-00	RES,CHIP	47K	5%	1/10W
R683	1-216-089-00	RES,CHIP	47K	5%	1/10W
R701	1-216-017-00	RES,CHIP	47	5%	1/10W
R702	1-216-073-00	METAL CHIP	10K	5%	1/10W
R703	1-216-025-00	RES,CHIP	100	5%	1/10W
R704	1-216-025-00	RES,CHIP	100	5%	1/10W
		< CONPOSITION CIRCUIT BLOCK >			
RB601	1-233-413-11	RES, CHIP NETWORK 2.2K (3216)			
RB602	1-233-810-21	RES, NETWORK 100K (3216)			
		< VARIABLE RESISTOR >			
RV1	1-223-836-11	RES, ADJ, CARBON 220K			
		< SWITCH >			
S501	1-571-478-11	SWITCH, SLIDE (POWER SELECT)			
S503	1-692-431-21	SWITCH, TACTILE (RESET)			
		< THERMISTOR >			
TH701	1-801-792-21	THERMISTOR, POSITIVE			
		< TUNER >			
TU1	1-693-440-21	TUNER UNIT FAE342-E01 (FM/AM)			
		< VIBRATOR >			
X1	1-781-246-11	VIBRATOR, CRYSTAL (10.25MHz)			
X51	1-579-242-41	VIBRATOR, CRYSTAL (4.332MHz)			

Ref. No.	Part No.	Description	Remark
X501	1-767-833-21	VIBRATOR, CERAMIC (3.68MHz)	
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)	
**********			
		MISCELLANEOUS	
		**********	
13	1-782-093-11	CORD (WITH CONNECTOR) (ISO-S)	(SPEAKER)
14	1-777-989-21	CORD (WITH CONNECTOR) (AMP REM)	(C5110R)
14	1-777-989-41	CORD (WITH CONNECTOR) (AMP REM, ATT)	(C5120R)
15	1-782-092-11	CORD (WITH CONNECTOR) (ISO-P) (POWER)	
F801	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
HP901	1-500-196-21	HEAD, MAGNETIC (PLAYBACK)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-621-772-10	SCREW +B 2X4	
#2	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#3	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#4	7-685-795-09	SCREW +PTT 2.6X12 (S)	
#5	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	
#6	7-624-104-04	STOP RING 2.0, TYPE-E	
#7	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	3-865-674-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)	
	3-865-674-21	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN) (AEP)	
	3-865-674-31	MANUAL, INSTRUCTION (GERMAN, RUSSIAN) (German)	
	3-865-674-41	MANUAL, INSTRUCTION (ENGLISH, GREEK, CZECH, POLISH, TURKISH) (South European)	
	3-865-675-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)	
	3-865-675-21	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN, RUSSIAN) (AEP, German)	
	3-865-675-31	MANUAL, INSTRUCTION, INSTALL (ENGLISH, CZECH, POLISH, TURKISH, GREEK) (South European)	
	X-3373-412-1	CASE (PANEL) ASSY (for FRONT PANEL)	
**********			

Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONECTIONS	
		**********	
501	X-3370-077-1	SCREW ASSY (AE. KEY), FITTING	
502	3-916-161-31	FRAME ASSY	
503	1-465-459-21	ADAPTER, ANTENNA	
504	1-782-093-11	CORD (WITH CONNECTOR) (ISO-S)	(SPEAKER)
505	1-782-092-11	CORD (WITH CONNECTOR) (ISO-P) (POWER)	
506	1-777-989-21	CORD (WITH CONNECTOR) (AMP REM)	(C5110R)
506	1-777-989-41	CORD (WITH CONNECTOR) (AMP REM, ATT)	(C5120R)



9-926-426-11

Sony Corporation
Personal & Mobile Communication Company

99A057542-1
Printed in Hungary © 1999. 1
Published by Quality Assurance Dept.